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ABSTRACT

THIS CONCLUDING VOLUME OF A FIVE-VOLUME PROJECT CONSISTS OF A CASE STUDY WHICH IS DESIGNED TO ELICIT FROM THE TEACHER A PERFORMANCE BASED ON THE EXPERIENCE GAINED (FROM THE PREVIOUS VOLUMES) IN WRITING PRESCRIPTIONS. THE TEACHER IS FURNISHED WITH DATA ON A STUDENT DESIGNATED JOHN WHICH INCLUDE A PLACEMENT PROFILE, PLACEMENT TEST, UNIT RECORD TEST, ANALYSIS OF JOHN'S BEHAVIOR, UNIT PRETEST AND POSTTEST. THE TEACHER IS EXPECTED TO ANALYZE THE DATA AND USE THEM IN PREPARING A PRESCRIPTION FOR JOHN. (GO)

ED036152

TEACHING IN IPI

EM001138

volume V

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T E A C H I N G I N I P I
(A Program of Teacher Preparation)

by

Claire A. Moshy
Research Associate

Volume 5

Research for Better Schools, Inc.

Regional Educational Laboratory

James W. Becker, Executive Director

Robert G. Scanlon, Director of Instructional Systems

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TEACHING IN IPI

Section IV

Developing a Prescription

Part 2 (Continued)

Section IV

DEVELOPING A PRESCRIPTION

CASE STUDY - TYPE 4

JOHN TANES

C-COP

Directions

This case study is organized in a format that draws upon your experience in writing prescriptions.

The following data is provided for you:

Placement Profile.....	page 3
Placement Test - Level C.....	page 4
Unit Test Record.....	pages 5-6
Analysis of Student Behavior.....	pages 7-8
Unit Pretest - C-COP.....	page 10-16
Unit Posttest - C-COP.....	page 139-146

You will analyze this information and use it to write the unit prescription for John in C-COP.

Use the STS booklets for Skills 1-6 to simulate John's work on the skill sheets you prescribe. (pages 17-138)

Your prescriptions should reflect the variety of instructional decisions and settings that you have been working with to this point.

It will be helpful if you keep a record of your instructional decisions as you work through this case study. The form of this record is your decision.

Your prescriptions should be recorded on the blank Prescription Sheets located at the back of this case study. (pages 147-150)

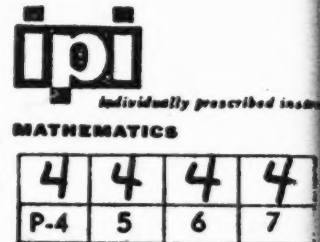
John's Placement Profile is on page 3.

It indicates the units in which John needed work. Study the C-Level Placement Test on page 4.

Refer to the Unit Test Record on pages 5-6. It shows John's unit mastery to this point.

Use the Unit Test Record and the Placement Profile as a guide to assigning the next Pretest to John.

ARITHMETIC PLACEMENT SCORE PROFILE



STUDENT NAME

John Tanes

STUDENT NUMBER

4 4 4 4
P-4 5 6 7

SCHOOL STAMP

P. 2-3

GRADE

P. 3 9

ROOM

2

KEYPUNCH SAMPLE

P. 14-15	P. 16	P. 17-18	TO P. 78
MATH. AREA CODE	PLACED AT LEVEL	% OF PLACEMENT	
01	B	85	

MATHEMATICS AREA	DATE OF TEST	MATH AREA CODE	PLACEMENT LEVELS B—I								PLACED AT LEVEL
	P. 10-13		B	C	D	E	F	G	H	I	
NUMERATION		01	MAX. PTS.	10							C
			SCORE	4							
			%	40							
PLACE VALUE		02	MAX. PTS.	10							C
			SCORE	7							
			%	70							
ADDITION		03	MAX. PTS.	10							C
			SCORE	6							
			%	60							
SUBTRACTION		04	MAX. PTS.	10							C
			SCORE	3							
			%	30							
MULTIPLICATION		05	MAX. PTS.	X	X						D
			SCORE								
			%								
DIVISION		06	MAX. PTS.	X	X						D
			SCORE								
			%								
COMBINATION OF PROCESSES		07	MAX. PTS.	10							C
			SCORE	6							
			%	60							
FRACTIONS		08	MAX. PTS.	10	10						B
			SCORE	5	2						
			%	50	20						
MONEY		09	MAX. PTS.	10							C
			SCORE	7							
			%	70							
TIME		10	MAX. PTS.	10	10						D
			SCORE	9	4						
			%	90	40						
SYSTEMS OF MEASUREMENT		11	MAX. PTS.	10							C
			SCORE	5							
			%	50							
GEOMETRY		12	MAX. PTS.	10	10						D
			SCORE	10	7						
			%	100	70						
ADDITION AND SUBTRACTION		34	MAX. PTS.	10							C
			SCORE	9							
			%	90							

IPI Placement Test

C Combination of Processes (07)

NAME AND NUMBER John Tanes
DATE 9/30
CLASS 3 4m. 2

unit page 1 of 1

C I A C L E C O R R E C T B O X	N PYS	
	8	100%
	RT OF	
	PYS	%
	1	80
	3	60
	2	40
	1	20

Skill 4 — Directions: Write $>$ or $<$ in the to make a true number sentence.

2 PENNIES + 3 PENNIES = 5 PENNIES - 1 PENNY

18 INCHES - 7 INCHES  15 INCHES - 8 INCHES

Skill 4 — Directions: Write = or $\neq$ in the ☐ to make a true number sentence.

7 DOZEN + 4 DOZEN $\neq$ 3 DOZEN + 2 DOZEN

$$14 + 3 \neq 18 - 1$$

$$11 - 9 \boxed{=} 18 - 16$$

NAME Johanna Tanes

NUMBER 4444

MATHEMATICS UNIT TEST

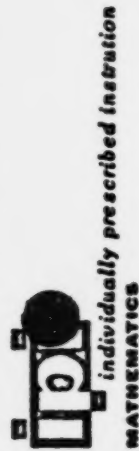
RECORD

CLASS 3-2

[illegible]

UPDATE AND PLACE IN STUDENT FOLDER.

Based upon prototype originated by the Learning Research and Development Center.
As field tested by Research for Better Schools, Inc.



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NAME John Tanes
NUMBER 4444

MATHEMATICS UNIT TEST RECORD

CLASS 3-2

FRACTIONS (88)	Level B	Level C				Level 1-Pre-2				Level 1-Pre-2				Level 1-Pre-2				Level 1-Pre-2				Level 1-Pre-2			
		1-Pre-2	Post	1-Pre-2	Post	1-Pre-2	Post	1-Pre-2	Post	1-Pre-2	Post	1-Pre-2	Post	1-Pre-2	Post	1-Pre-2	Post	1-Pre-2	Post	1-Pre-2	Post				
PLACED AT LEVEL B	Max. Pts. <u>100</u> Score <u>50</u> Date <u>10/1</u>																								
MONEY (89)	Level																								
PLACED AT LEVEL C	Max. Pts. <u>100</u> Score <u>50</u> Date <u>10/1</u>																								
TIME (10)	Level																								
PLACED AT LEVEL D	Max. Pts. <u>100</u> Score <u>50</u> Date <u>10/1</u>																								
SYSTEMS OF MEASUREMENT (11)	Level																								
PLACED AT LEVEL C	Max. Pts. <u>100</u> Score <u>50</u> Date <u>10/1</u>																								
GEOMETRY (12)	Level																								
PLACED AT LEVEL D	Max. Pts. <u>100</u> Score <u>50</u> Date <u>10/1</u>																								
SPECIAL TOPICS (13)	Level																								
PLACED AT LEVEL C	Max. Pts. <u>100</u> Score <u>50</u> Date <u>10/1</u>																								
ADDITION AND SUBTRACTION (34)	Level																								
PLACED AT LEVEL C	Max. Pts. <u>100</u> Score <u>50</u> Date <u>10/1</u>																								

UPDATE AND PLACE IN STUDENT FOLDER.

Analysis of Student Behavior

1. The behaviors which will help John's learning...

He is an enthusiastic learner and is able to apply himself to a learning situation until he has mastered it.

2. The behaviors which will hamper John's learning...

His reading ability is not equal to his math skill.
He has difficulty learning from printed materials.

3. The new behaviors which John will learn in conjunction with the IPI math learnings...

He needs to increase his vocabulary skills.

Describe how your prescriptions will attempt to
reflect these behaviors...

1. _____

2. _____

3. _____

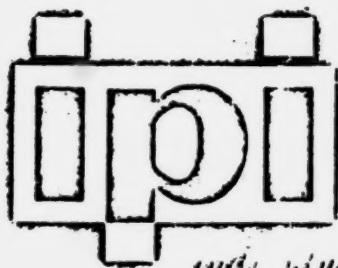
This is a copy of the Pretest completed by John and corrected by the Aide. Record (in the role of Aide) the Pretest results on the first Prescription Sheet in your packet.

Analyze the Pretest results and write the first prescription.

SCHOOL CODE

NAME John Tares

NUMBER 4444 CLASS 3 Ln. 2



and quality personnel instruction

MATHEMATICS

Pre-Test

LEVEL C

COMBINATION OF PROCESSES (07)

Developed by The Testing and Evaluation Staff, Learning Research and Development Center, University of Pittsburgh; Richard Cox, Ph.D., Director

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

Directions: Add or subtract, as indicated by the sign.

$$\begin{array}{r} 37 \\ + 22 \\ \hline 59 \end{array}$$

$$\begin{array}{r} 63 \\ - 20 \\ \hline 43 \end{array}$$

$$45 + 34 = \underline{78} \quad \times$$

$$17 - 12 = \underline{5}$$

$$\begin{array}{r} 62 \\ - 52 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 48 \\ + 21 \\ \hline 27 \end{array} \quad \times$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	
	5	83
	4	67
	3	50
	2	33
	1	17

Directions: Add or subtract.

$$\begin{array}{r} 4 \text{ yards} \\ + 5 \text{ yards} \\ \hline 9 \text{ yards} \end{array}$$

$$\begin{array}{r} 12 \text{ cents} \\ + 5 \text{ cents} \\ \hline 7 \text{ cents} \end{array} \quad \times$$

$$\begin{array}{r} 18 \text{ dozen} \\ - 6 \text{ dozen} \\ \hline 12 \text{ dozen} \end{array}$$

$$\begin{array}{r} 4 \text{ feet} \\ + 6 \text{ feet} \\ \hline 10 \text{ feet} \end{array}$$

$$13 \text{ yards} - 2 \text{ yards} = \underline{12} \text{ yards} \quad \times$$

$$6 \text{ inches} + 7 \text{ inches} = \underline{13} \text{ inches}$$

$$8 \text{ feet} - 5 \text{ feet} = \underline{13} \text{ feet} \quad \times$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	7	100%
	NO. OF PTS.	
	%	
	6	86
	5	71
	4	57
	3	43
	2	29
	1	14

C COMBINATION OF PROCESSES (07) PRE-TEST SKILL 3

Directions: Solve each problem.

John has 10 pennies. Judy has 5 pennies. How many pennies have John and Judy together? 15 pennies

Susan has a ruler 12 inches long. Her doll's bed is 6 inches longer than the ruler. How many inches long is her doll's bed? 18 inches

Jim hiked 6 miles in the morning and 8 miles in the afternoon. How many miles farther did Jim hike in the afternoon than in the morning? 2 miles

Dick had to miss 5 days of school one week and 4 days the next week. How many days of school did Dick miss during the two weeks? 9 days

C I R C L E C O R R E C T B O X	TL. PTS.	
	4	100%
	NO. OF PTS.	%
	3	75
	2	50
	1	25

Directions: Put $>$, $<$, or $=$ in each circle to make a true number sentence.

5 weeks + 4 weeks $\bigcirc =$ 10 weeks - 1 week

15 pennies - 4 pennies $\bigcirc >$ 5 pennies + 5 pennies

9 yards - 3 yards $\bigcirc =$ 2 yards + 4 yards

3 feet + 4 feet $\bigcirc <$ 6 feet - 5 feet $\times$

6 miles + 7 miles $\bigcirc =$ 18 miles - 4 miles $\times$

C I R C L E	TL. PTS.	
	7	100%
C O R R E C T	NO. OF PTS.	
	6	86
B O X	5	71
	4	57
	3	43
	2	29
	1	14

Directions: Put $=$ or $\neq$ in each circle to make a true number sentence.

8 inches - 2 inches $\bigcirc =$ 10 inches - 8 inches $\times$

6 dimes + 3 dimes $\bigcirc =$ 11 dimes - 2 dimes

Directions: Put + or - in each circle to make a true number sentence.

8 $\bigcirc -$ 5 = 13 X

9 $\bigcirc +$ 7 = 2 X

9 $\bigcirc +$ 3 = 6 X

11 $\bigcirc -$ 3 = 14 X

6 $\bigcirc -$ 4 = 10 X

C I R C L E C O R R E C T B O X	TL. PTS.	
	5	100%
	NO. OF PTS.	%
	4	80
	3	60
	2	40
	1	20
	~~0~~	~~0~~

Directions: Fill in the blanks to make each number sentence true.

$$5 - 1 = 2 + \underline{3} \quad X$$

$$4 - \underline{2} = 2 + 1 \quad X$$

$$6 - \underline{2} = 4 + 2 \quad X$$

$$1 + 6 = \underline{6} - 3 \quad X$$

$$\underline{9} + 2 = 9 - 4 \quad X$$

C I R C L E	TL. PTS.	
	5	100%
C O R R E C T	NO. OF PTS.	%
	4	80
B O X	3	60
	2	40
	1	20
	0	0

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____



Mathematics Curriculum Staff

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL C

COMBINATION OF PROCESSES (07)

SKILL 1

Based upon materials developed by The Mathematics Curriculum Staff,
Learning Research and Development Center, University of Pittsburgh; Joseph
I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of
Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Find the sums and differences.

$$\begin{array}{r} 32 \\ + 45 \\ \hline \end{array}$$

$$\begin{array}{r} 94 \\ - 51 \\ \hline \end{array}$$

$$\begin{array}{r} 88 \\ - 36 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ + 66 \\ \hline \end{array}$$

You will practice these types of problems in this booklet.

Answer

77	
43	52
89	

When you add, always add the ones column first, then the tens column.

EXAMPLE

$$\begin{array}{r}
 36 \\
 + 21 \\
 \hline
 \end{array}
 \rightarrow
 \begin{array}{r}
 3\overline{)6} \\
 + 2\overline{)1} \\
 \hline
 \overline{)7}
 \end{array}
 \rightarrow
 \begin{array}{r}
 3\overline{)6} \\
 + 2\overline{)1} \\
 \hline
 \overline{)5}
 \end{array}
 \text{ so }
 \begin{array}{r}
 36 \\
 + 21 \\
 \hline
 57
 \end{array}$$

Find the sums and write the numerals in the boxes.

		ones		tens		
$ \begin{array}{r} 43 \\ + 52 \\ \hline \end{array} $	→	$ \begin{array}{r} 4\overline{)3} \\ + 5\overline{)2} \\ \hline \boxed{5} \end{array} $	→	$ \begin{array}{r} 4\overline{)3} \\ + 5\overline{)2} \\ \hline \boxed{9}5 \end{array} $	so	$ \begin{array}{r} 43 \\ + 52 \\ \hline \boxed{95} \end{array} $
$ \begin{array}{r} 74 \\ + 13 \\ \hline \end{array} $	→	$ \begin{array}{r} 7\overline{)4} \\ + 1\overline{)3} \\ \hline \boxed{7} \end{array} $	→	$ \begin{array}{r} 7\overline{)4} \\ + 1\overline{)3} \\ \hline \boxed{8} \end{array} $	so	$ \begin{array}{r} 74 \\ + 13 \\ \hline \boxed{87} \end{array} $
$ \begin{array}{r} 62 \\ + 35 \\ \hline \end{array} $	→	$ \begin{array}{r} 6\overline{)2} \\ + 3\overline{)5} \\ \hline \boxed{7} \end{array} $	→	$ \begin{array}{r} 6\overline{)2} \\ + 3\overline{)5} \\ \hline \boxed{9} \end{array} $	so	$ \begin{array}{r} 62 \\ + 35 \\ \hline \boxed{97} \end{array} $
$ \begin{array}{r} 37 \\ + 41 \\ \hline \end{array} $	→	$ \begin{array}{r} 3\overline{)7} \\ + 4\overline{)1} \\ \hline \boxed{8} \end{array} $	→	$ \begin{array}{r} 3\overline{)7} \\ + 4\overline{)1} \\ \hline \boxed{7} \end{array} $	so	$ \begin{array}{r} 37 \\ + 41 \\ \hline \boxed{78} \end{array} $

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
C	07	1	1

When you subtract, always subtract the ones column first, then the tens column.

EXAMPLE

$$\begin{array}{r}
 47 \\
 - 34 \\
 \hline
 \end{array}
 \Rightarrow
 \begin{array}{r}
 \begin{array}{cc} \text{ones} & \text{tens} \end{array} \\
 \begin{array}{|c|c|} \hline 4 & 7 \\ \hline \end{array} \\
 - \begin{array}{|c|c|} \hline 3 & 4 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|} \hline 3 \\ \hline \end{array}
 \end{array}
 \Rightarrow
 \begin{array}{r}
 \begin{array}{cc} \text{ones} & \text{tens} \end{array} \\
 \begin{array}{|c|c|} \hline 4 & 7 \\ \hline \end{array} \\
 - \begin{array}{|c|c|} \hline 3 & 4 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|} \hline 1 \\ \hline \end{array}
 \end{array}
 \text{ so }
 \begin{array}{r}
 47 \\
 - 34 \\
 \hline
 13
 \end{array}$$

Do the subtraction problem and write the numerals in the boxes.

$$\begin{array}{r}
 88 \\
 - 56 \\
 \hline
 \end{array}
 \Rightarrow
 \begin{array}{r}
 \begin{array}{cc} \text{ones} & \text{tens} \end{array} \\
 \begin{array}{|c|c|} \hline 8 & 8 \\ \hline \end{array} \\
 - \begin{array}{|c|c|} \hline 5 & 6 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|} \hline 2 \\ \hline \end{array}
 \end{array}
 \Rightarrow
 \begin{array}{r}
 \begin{array}{cc} \text{ones} & \text{tens} \end{array} \\
 \begin{array}{|c|c|} \hline 8 & 8 \\ \hline \end{array} \\
 - \begin{array}{|c|c|} \hline 5 & 6 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|} \hline 3 \\ \hline \end{array}
 \end{array}
 \text{ so }
 \begin{array}{r}
 88 \\
 - 56 \\
 \hline
 32
 \end{array}$$

$$\begin{array}{r}
 96 \\
 - 53 \\
 \hline
 \end{array}
 \Rightarrow
 \begin{array}{r}
 \begin{array}{cc} \text{ones} & \text{tens} \end{array} \\
 \begin{array}{|c|c|} \hline 9 & 6 \\ \hline \end{array} \\
 - \begin{array}{|c|c|} \hline 5 & 3 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|} \hline 3 \\ \hline \end{array}
 \end{array}
 \Rightarrow
 \begin{array}{r}
 \begin{array}{cc} \text{ones} & \text{tens} \end{array} \\
 \begin{array}{|c|c|} \hline 9 & 6 \\ \hline \end{array} \\
 - \begin{array}{|c|c|} \hline 5 & 3 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|} \hline 4 \\ \hline \end{array}
 \end{array}
 \text{ so }
 \begin{array}{r}
 96 \\
 - 53 \\
 \hline
 43
 \end{array}$$

$$\begin{array}{r}
 49 \\
 - 27 \\
 \hline
 \end{array}
 \Rightarrow
 \begin{array}{r}
 \begin{array}{cc} \text{ones} & \text{tens} \end{array} \\
 \begin{array}{|c|c|} \hline 4 & 9 \\ \hline \end{array} \\
 - \begin{array}{|c|c|} \hline 2 & 7 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|} \hline 2 \\ \hline \end{array}
 \end{array}
 \Rightarrow
 \begin{array}{r}
 \begin{array}{cc} \text{ones} & \text{tens} \end{array} \\
 \begin{array}{|c|c|} \hline 4 & 9 \\ \hline \end{array} \\
 - \begin{array}{|c|c|} \hline 2 & 7 \\ \hline \end{array} \\
 \hline
 \begin{array}{|c|} \hline 2 \\ \hline \end{array}
 \end{array}
 \text{ so }
 \begin{array}{r}
 49 \\
 - 27 \\
 \hline
 22
 \end{array}$$

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
C	07	1	2

Find the sums and differences.

$$\begin{array}{r} 9 \\ + 3 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 17 \\ + 42 \\ \hline 59 \end{array}$$

$$\begin{array}{r} 17 \\ - 11 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 18 \\ - 11 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 41 \\ + 48 \\ \hline 89 \end{array}$$

$$\begin{array}{r} 59 \\ + 40 \\ \hline 99 \end{array}$$

$$\begin{array}{r} 40 \\ + 50 \\ \hline 90 \end{array}$$

$$\begin{array}{r} 17 \\ - 6 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 86 \\ - 3 \\ \hline 83 \end{array}$$

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
C	07	1	3

Find the missing sums and differences.

$$10 + 6 = 16$$

$$41 + 21 = 62$$

$$30 - 10 = 20$$

$$18 - 6 = 12$$

$$20 + 31 = 51$$

$$\begin{array}{r} 12 \\ + 30 \\ \hline 42 \end{array}$$

$$\begin{array}{r} 88 \\ - 7 \\ \hline 81 \end{array}$$

$$\begin{array}{r} 90 \\ + 6 \\ \hline 96 \end{array}$$

$$\begin{array}{r} 18 \\ - 11 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 40 \\ + 23 \\ \hline 63 \end{array}$$

$$65 - 12 = 53$$

$$22 - 11 = 11$$

$$49 + 10 = 59$$

$$54 + 11 = 65$$

$$81 + 8 = 89$$

TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
C	07	1	4

Find the sums and differences.

$$\begin{array}{r} 40 \\ + 40 \\ \hline 80 \end{array}$$

$$\begin{array}{r} 36 \\ - 11 \\ \hline 25 \end{array}$$

$$\begin{array}{r} 17 \\ + 70 \\ \hline 87 \end{array}$$

$$20 - 10 = 10$$

$$38 + 10 = 48$$

$$46 + 3 = 49$$

$$\begin{array}{r} 20 \\ + 63 \\ \hline 83 \end{array}$$

$$\begin{array}{r} 82 \\ + 12 \\ \hline 94 \end{array}$$

$$\begin{array}{r} 87 \\ - 2 \\ \hline 85 \end{array}$$

$$39 - 8 = 31$$

$$46 - 5 = 41$$

$$60 - 30 = 30$$

$$\begin{array}{r} 11 \\ + 80 \\ \hline 91 \end{array}$$

$$89 - 9 = 80$$

$$76 + 11 = 87$$

$$49 - 39 = 10$$

$$18 - 7 = 11$$

For extra practice, do Page 12.

TOTAL POINTS	NUMBER CORRECT
17	

LEVEL	UNIT	SKILL	PAGE
C	07	1	5

In the boxes write the numerals missing to make 48.

$$\boxed{43} + 5 = 48$$

$$59 - \boxed{11} = 48$$

$$16 + \boxed{32} = 48$$

$$\boxed{98} - 50 = 48$$

$$\boxed{68} - 20 = 48$$

$$\boxed{27} + 21 = 48$$

$$32 + \boxed{16} = 48$$

$$68 - \boxed{20} = 48$$



$$\boxed{20} + 28 = 48$$

$$\boxed{28} + 20 = 48$$

$$30 + \boxed{18} = 48$$

$$\boxed{78} - 30 = 48$$

$$89 - \boxed{41} = 48$$

$$24 + \boxed{24} = 48$$

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
C	07	1	6

Fill in the missing numerals.

$$\begin{array}{r} 49 \\ + 30 \\ \hline \square \end{array}$$

$$46 - \square = 30$$

$$\begin{array}{r} 50 \\ + \square \\ \hline 69 \end{array}$$

$$64 + \square = 85$$

$$\begin{array}{r} 22 \\ - 12 \\ \hline \square \end{array}$$

$$\square - 12 = 12$$

$$\begin{array}{r} 36 \\ - \square \\ \hline 21 \end{array}$$

$$49 + \square = 79$$

$$99 - \square = 88$$

$$\begin{array}{r} 32 \\ + \square \\ \hline 48 \end{array}$$

$$14 + \square = 29$$

$$\begin{array}{r} 33 \\ + 23 \\ \hline \square \end{array}$$

$$31 - \square = 10$$

For extra practice, do Page 13.

TOTAL POINTS	NUMBER CORRECT
13	

LEVEL	UNIT	SKILL	PAGE
C	07	1	7

Fill in the missing numerals.

$$99 - \boxed{11} = 88$$

$$80 - 20 = \boxed{60}$$

$$\begin{array}{r} 81 \\ + \boxed{18} \\ \hline 99 \end{array}$$

$$\begin{array}{r} 26 \\ - 11 \\ \hline \boxed{15} \end{array}$$

$$\begin{array}{r} 33 \\ + 33 \\ \hline \boxed{66} \end{array}$$

$$13 + \boxed{14} = 27$$

$$35 - 15 = \boxed{20}$$

$$\begin{array}{r} 76 \\ + \boxed{11} \\ \hline 87 \end{array}$$

$$98 - \boxed{18} = 80$$

$$\begin{array}{r} 80 \\ + \boxed{19} \\ \hline 99 \end{array}$$

$$\begin{array}{r} 23 \\ + \boxed{11} \\ \hline 34 \end{array}$$

TOTAL POINTS	NUMBER CORRECT
11	

LEVEL	UNIT	SKILL	PAGE
C	07	1	8

Fill in the correct numerals.

$$\begin{array}{r} 99 \\ - 12 \\ \hline \boxed{87} \end{array}$$

$$\begin{array}{r} 26 \\ + 11 \\ \hline \boxed{37} \end{array}$$

$$\begin{array}{r} 80 \\ - \boxed{20} \\ \hline 60 \end{array}$$

$$13 + \boxed{14} = 27$$

$$\begin{array}{r} 51 \\ + \boxed{40} \\ \hline 91 \end{array}$$

$$49 + 20 = \boxed{69}$$

$$29 - \boxed{18} = 11$$

$$\begin{array}{r} 92 \\ + \boxed{5} \\ \hline 97 \end{array}$$

$$\begin{array}{r} 48 \\ - \boxed{28} \\ \hline 20 \end{array}$$

$$\begin{array}{r} 98 \\ - \boxed{18} \\ \hline 80 \end{array}$$

$$41 - \boxed{11} = 30$$

$$36 + \boxed{12} = 48$$

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
C	07	1	9

Write the missing numerals in the boxes.

$$\begin{array}{r} 49 \\ - \square \\ \hline 22 \end{array}$$

$$\begin{array}{r} 46 \\ - 36 \\ \hline \square 10 \end{array}$$

$$36 + 30 = \square 66$$

$$\square 41 + 58 = 99$$

$$58 - \square 22 = 36$$

$$\begin{array}{r} 98 \\ - \square 17 \\ \hline 31 \end{array}$$

$$\square 78 - 55 = 23$$

$$\begin{array}{r} \square 51 \\ + 42 \\ \hline 93 \end{array}$$

For extra practice, do Page 14.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
C	07	1	10

CET I

Add or subtract.

63	39	47	28
<u>+ 35</u>	<u>- 25</u>	<u>- 31</u>	<u>+ 71</u>
_____	_____	_____	_____

62 + 37 = _____	37 - 14 = _____
-----------------	-----------------

_____ + 11 = 32	16 + _____ = 38
-----------------	-----------------

23	48	53	85
<u>- 2</u>	<u>+ 20</u>	<u>- 23</u>	<u>+ 4</u>
_____	_____	_____	_____
26 + 42 = _____	93 - 81 = _____		

C I R C L E C O R R E C T B O X	TL PTS.	
	14	100%
	NO. OF PTS.	
	13	93
	12	86
	11	79
	10	71
	9	64
	8	57
	7	50
	6	43
	5	36
	4	29
	3	21
	2	14
	1	7

Add or subtract as the sign tells you.

10 inches	11¢	18 pennies
<u>- 8 inches</u>	<u>+ 7¢</u>	<u>- 8 pennies</u>
_____ inches	_____¢	_____ pennies

12 squares + 5 squares = _____ squares

C I R C L E C O R R E C T B O X	TL PTS.	
	4	100%
	NO. OF PTS.	
	3	75
	2	50
	1	25

LEVEL	UNIT	SKILL	PAGE
C	07	1	11

Find the sums and differences.

$$38 + 11 = \underline{49}$$

$$41 + 11 = \underline{52}$$

$$49 - 15 = \underline{34}$$

$$11 + 13 = \underline{24}$$

$$8 + 90 = \underline{98}$$

$$99 - 12 = \underline{87}$$

$$91 - 21 = \underline{70}$$

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
C	07	1	12

Fill in the missing numerals.

$$3 + \boxed{91} = 94$$

$$\begin{array}{r} 18 \\ - \boxed{11} \\ \hline 7 \end{array}$$

$$\begin{array}{r} 83 \\ - 11 \\ \hline \boxed{72} \end{array}$$

$$\boxed{84} - 20 = 64$$

$$\begin{array}{r} 11 \\ + \boxed{78} \\ \hline 89 \end{array}$$

$$11 + \boxed{23} = 34$$

$$\begin{array}{r} \boxed{28} \\ + 70 \\ \hline 98 \end{array}$$

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
C	07	1	13

Write the missing numerals.

$$48 + \boxed{\begin{array}{c} 11 \\ 11 \\ 11 \end{array}} = 59$$

$$\boxed{53} - 42 = 11$$

$$\begin{array}{r} 89 \\ - 13 \\ \hline \boxed{76} \end{array}$$

$$\begin{array}{r} 37 \\ - \boxed{16} \\ \hline 21 \end{array}$$

$$\begin{array}{r} 18 \\ - 7 \\ \hline \boxed{11} \end{array}$$

$$\boxed{45} + 12 = 57$$

$$31 + \boxed{55} = 86$$

$$\begin{array}{r} 99 \\ - \boxed{47} \\ \hline 52 \end{array}$$

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	Skill	PAGE
C	07	1	14

CET II

Add or subtract as the sign tells you.

$$\begin{array}{r} 69 \\ - 42 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 37 \\ - 24 \\ \hline \end{array}$$

$$\begin{array}{r} 12 \\ + 33 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ + 15 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ - 2 \\ \hline \end{array}$$

$$\begin{array}{r} 76 \\ + 23 \\ \hline \end{array}$$

$$\begin{array}{r} 63 \\ - 32 \\ \hline \end{array}$$

$$17 - 9 = \underline{\quad}$$

$$32 - 12 = \underline{\quad}$$

$$27 + 42 = \underline{\quad}$$

$$\underline{\quad} + 8 = 8$$

$$8 + \underline{\quad} = 15$$

$$\underline{\quad} - 56 = 1$$

C I R C L E C O R R E C T B O X	TL PTS	
	14	100%
	NO OF PTS	-
	13	93
	12	86
	11	79
	10	71
	9	64
	8	57
	7	50
	6	43
	5	36
	4	29
	3	21

Add or subtract as the sign tells you.

$$\begin{array}{r} 6 \text{ feet} \\ - 3 \text{ feet} \\ \hline \end{array}$$

$$\begin{array}{r} 4 \text{ minutes} \\ + 7 \text{ minutes} \\ \hline \end{array}$$

$$\begin{array}{r} 8\text{¢} \\ + 6\text{¢} \\ \hline \end{array}$$

$$\underline{\quad} \text{ feet} \quad \underline{\quad} \text{ minutes} \quad \underline{\quad} \text{ ¢}$$

$$16 \text{ inches} - 9 \text{ inches} = \underline{\quad} \text{ inches}$$

C I R C L E C O R R E C T B O X	TL PTS	
	4	100%
	NO OF PTS	%
	3	75
	2	50
	1	25

LEVEL	UNIT	SKILL	PAGE
C	07	1	15

LEVEL C, COMBINATION OF PROCESSES, SKILL 1

OBJECTIVE: Adds or subtracts as indicated for mixed sets of problems with sums to 99.
No borrowing or carrying. Problems in vertical or horizontal form and may contain missing addends.

STANDARD TEACHING SEQUENCE

Page	Supplementary Material
1. Does two-step addition.	
2. Does two-step subtraction.	
3. Finds the sums and differences.	
4. Finds the sums and differences.	
5. Finds the sums and differences.	12
6. Fills in missing addend.	
7. Fills in missing addend.	13
8. Finds sums and differences or fills in missing addends.	
9. Finds sums and differences or fills in missing addends.	
10. Finds sums and differences or fills in missing addends.	14
11. CET I.	
CET II.	15

Circle pages that have to be done.

Page 17

C-Cop-1

Standard Teaching Sequence, Con't

1967 - 68

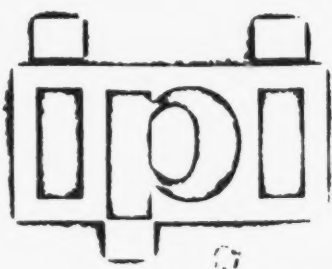
Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1965 <u>One By One</u> (Grade 1)		149
Harcourt, Brace & World, 1965 <u>Two By Two</u> (Grade 2)		106, 117, 137, 145
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> (Gr. 3)		114, 115

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____



MATHEMATICS

Standard Teaching Copy and Booklet

TEACHER'S EDITION

LEVEL C

COMBINATION OF PROCESSES (07)

SKILL 2

Based upon materials developed by The Mathematics Curriculum Staff,
Learning Research and Development Center, University of Pittsburgh; Joseph
I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of
Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Write the answers in the blanks.

17 days

-10 days

_____ days

4 squares

+8 squares

_____ squares

You will practice doing problems like these in this booklet.

Answers

7, 12

Find the sums and the differences.

$$\begin{array}{r} 15\text{¢} \\ - 8\text{¢} \\ \hline 7\text{¢} \end{array}$$

$$\begin{array}{r} 7\text{¢} \\ + 9\text{¢} \\ \hline 16\text{¢} \end{array}$$

$$\begin{array}{r} 5\text{¢} \\ + 6\text{¢} \\ \hline 11\text{¢} \end{array}$$

$$\begin{array}{r} 14\text{¢} \\ - 6\text{¢} \\ \hline 8\text{¢} \end{array}$$

$$\begin{array}{r} 9\text{¢} \\ + 4\text{¢} \\ \hline 13\text{¢} \end{array}$$

cents

$$\begin{array}{r} 18\text{¢} \\ - 6\text{¢} \\ \hline 12\text{¢} \end{array}$$

$$7\text{¢} + 7\text{¢} = 14\text{¢}$$

$$15\text{¢} - 3\text{¢} = 12\text{¢}$$

$$13\text{¢} + 4\text{¢} = 17\text{¢}$$

$$15\text{¢} - 10\text{¢} = 5\text{¢}$$

$$8\text{¢} + 8\text{¢} = 16\text{¢}$$

TOTAL POINTS	NUMBER CORRECT
11	

LEVEL	UNIT	SKILL	DATE
2	07	2	

Find the sums and the differences.

$$\begin{array}{r} 9 \text{ hours} \\ + 7 \text{ hours} \\ \hline 16 \text{ hours} \end{array}$$

time

$$\begin{array}{r} 12 \text{ days} \\ - 9 \text{ days} \\ \hline 3 \text{ days} \end{array}$$

$$14 \text{ hours} - 5 \text{ hours} = 9 \text{ hours}$$

$$\begin{array}{r} 8 \text{ months} \\ + 4 \text{ months} \\ \hline 12 \text{ months} \end{array}$$

$$\begin{array}{r} 6 \text{ minutes} \\ + 7 \text{ minutes} \\ \hline 13 \text{ minutes} \end{array}$$

$$\begin{array}{r} 17 \text{ years} \\ - 15 \text{ years} \\ \hline \text{ } \text{ years} \end{array}$$

$$3 \text{ weeks} + 10 \text{ weeks} = 13 \text{ weeks}$$

$$15 \text{ years} - 8 \text{ years} = 7 \text{ years}$$

$$5 \text{ days} + 5 \text{ days} = 10 \text{ days}$$

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
C	07	2	2

Find the sums and the differences.

11 circles

+ 6 circles

17 circles

16 squares

- 2 squares

14 squares

12 triangles

+ 4 triangles

16 triangles

geometry

9 rectangles + 3 rectangles = 12 rectangles

18 triangles - 7 triangles = 11 triangles

5 circles

+ 8 circles

13 circles

16 squares

- 8 squares

8 squares

9 circles

+ 5 circles

14 circles

TOTAL POINTS	NUMBER CORRECT
8	

MODEL	UNIT	SKILL	PAGE
C	07	2	3

Find the sums and the differences.

$$\begin{array}{r} 3 \text{ yards} \\ + 8 \text{ yards} \\ \hline 11 \text{ yards} \end{array}$$

$$\begin{array}{r} 17 \text{ feet} \\ - 4 \text{ feet} \\ \hline 13 \text{ feet} \end{array}$$

$$\begin{array}{r} 15 \text{ dozen} \\ - 9 \text{ dozen} \\ \hline 6 \text{ dozen} \end{array}$$

measurement

$$\begin{array}{r} 8 \text{ inches} \\ + 7 \text{ inches} \\ \hline 15 \text{ inches} \end{array}$$

$$\begin{array}{r} 9 \text{ feet} \\ - 6 \text{ feet} \\ \hline 3 \text{ feet} \end{array}$$

$$\begin{array}{r} 15 \text{ yards} \\ - 1 \text{ yard} \\ \hline 14 \text{ yards} \end{array}$$

$$\begin{array}{r} 10 \text{ dozen} \\ - 4 \text{ dozen} \\ \hline 6 \text{ dozen} \end{array}$$

$$\begin{array}{r} 7 \text{ inches} \\ + 4 \text{ inches} \\ \hline 11 \text{ inches} \end{array}$$

$$\begin{array}{r} 18 \text{ feet} \\ - 9 \text{ feet} \\ \hline 9 \text{ feet} \end{array}$$

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
C	07	2	4

Find the sums and the differences.

17 months	11¢	12 hours
<u>- 8 months</u>	<u>+ 4¢</u>	<u>- 7 hours</u>
<u>9</u> months	<u>15¢</u>	<u>5</u> hours

4 circles + 9 circles = 13 circles

14 months - 11 months = 3 months

8 triangles + 5 triangles = 13 triangles

11 dozen	15¢	5 inches
<u>+ 6 dozen</u>	<u>- 9¢</u>	<u>+ 7 inches</u>
<u>17</u> dozen	<u>6¢</u>	<u>12</u> inches

For extra practice, do Pages 7, 8, and 9.

TOTAL POINTS	NUMBER CORRECT
0	

LEVEL	UNIT	SKILL	PAGE
C	07	2	5

CET I

Solve each problem.

$$2 \text{ minutes} + 10 \text{ minutes} = \underline{\hspace{2cm}} \text{ minutes}$$

$$13 \text{ feet} - 7 \text{ feet} = \underline{\hspace{2cm}} \text{ feet}$$

12¢

+ 5¢

 ¢

12 apples

- 4 apples apples

8 dogs

- 4 dogs dogs

18 hours

- 7 hours hours

11 circles

- 6 circles circles

12 dimes

- 10 dimes dimes

$$4 \text{ eggs} + 13 \text{ eggs} = \underline{\hspace{2cm}} \text{ eggs}$$

$$14 \text{ days} - 12 \text{ days} = \underline{\hspace{2cm}} \text{ days}$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	10	100%
	NO. OF	%
	PTS.	
	9	90
	8	80
	7	70
	6	60
	5	50
	4	40
	3	30
	2	20
	1	10

Solve these word problems.

Sue had 12 pieces of candy. She gave 5 pieces to Bill. How many did she have left? pieces.

Bill had 6 red boats and 7 green boats. boats did he have in all? boats.

C I R C L E C O R R E C T B O X	TL. PTS.	
	2	100%
	NO. OF	%
	PTS.	

LEVEL	UNIT	SKILL	PAGE
C	07	2	6

Write the answers in the blanks.

5 hours

+ 4 hours

9 hours

14 months

+ 3 months

17 months

6 triangles

+ 8 triangles

14 triangles

7 years

+ 10 years

17 years

add

8 inches

+ 4 inches

12 inches

9¢

+ 8¢

17¢

12 squares + 4 squares = 16 squares

6 feet + 5 feet = 11 feet

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
C	07	2	7

Fill in the blanks.

$$15 \text{ minutes} - 3 \text{ minutes} = \underline{12} \text{ minutes}$$

$$10 \text{ rectangles} - 7 \text{ rectangles} = \underline{3} \text{ rectangles}$$

$$11 \text{ yards} - 4 \text{ yards} = \underline{7} \text{ yards}$$

$$18\text{¢} - 15\text{¢} = \underline{3} \text{ ¢}$$

subtract

12 circles

- 5 circles

7 circles

14 years

- 8 years

6 years

13 feet

- 9 feet

4 feet

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
C	07	2	8

Find the sums and the differences.

13¢	12 feet	11 hours	8¢
+ 5¢	- 6 feet	- 5 hours	+ 10¢
<u>18</u> ¢	<u>6</u> feet	<u>6</u> hours	<u>18</u> ¢

3 circles + 11 circles = 14 circles

17 days - 12 days = 5 days

18 yards - 4 yards = 14 yards

6 squares	18 feet
+ 7 squares	- 17 feet
<u>13</u> squares	<u>1</u> feet

7 years + 10 years = 17 years

18¢ - 6¢ = 12 ¢

TOTAL POINTS	NUMBER CORRECT
11	

LEVEL	UNIT	SKILL	PAGE
C	07	2	9

CET II

Find the sums or differences.

3 oranges + 7 oranges = _____ oranges

18 inches - 6 inches = _____ inches

4 circles + 12 circles = _____ circles

3¢ + 12¢ = _____¢ 25¢ - 10¢ = _____

4 dimes

8 yards

4 pennies

+ 6 dimes+ 5 yards- 0 pennies

_____ dimes

_____ yards

_____ pennies

7 apples - 5 apples = _____ apples

10 books + 0 books = _____ books

C I R C L E C O R R E C T B O X	TL. PTS.	
	10	100%
	NO. OF PTS.	%
	9	90
	8	80
	7	70
	6	60
	5	50
	4	40
	3	30
	2	20
	1	10

Solve each word problem.

Jimmy had 10¢. He spent 6¢ for an ice-cream cone. How much money did he have left? _____¢

Jane had two pet ducks named Sue and Sally. One week Susie laid 5 eggs and Sally laid 3 eggs. How many eggs did they lay in all? _____ eggs

C I R C L E C O R R E C T B O X	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	1	50

LEVEL	UNIT	SKILL	PAGE
C	07	2	10

LEVEL C, COMBINATIONS OF PROCESSES, SKILL 2

OBJECTIVE: Finds the sums and differences for problems involving money values, measurement units, time, and geometry, learned in Level B. Sums to 18. No conversion of units.

STANDARD TEACHING SEQUENCE

Page	Supplementary Material
1. Finds sums and differences involving money values (cents).	
2. Finds sums and differences involving time.	
3. Finds sums and differences involving names of geometrical figures.	
4. Finds sums and differences involving measurement units.	
5. Finds sums and differences involving money values, time, names of geometrical figures, and measurement units.	7, 8, 9
6. CET I.	
CET II.	10

Circle pages that are to be done.

Page 12

C-Cop-2

Standard Teaching Sequence, Con't

1967 - 68

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1965 <u>Two By Two</u> (Grade 2)		135

Standard Teaching Sequence, Con't.

1967 - 68

Teaching Aids:

See D-COP-1

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 3		104, 226, 329 (sets 9 & 11)
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 4		20, 330 (set 9)

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____



Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL C

COMBINATION OF PROCESSES (07)

SKILL 3

Based upon materials developed by The Mathematics Curriculum Staff,
Learning Research and Development Center, University of Pittsburgh; Joseph
I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of
Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

John had 3 toy cars. Sam had 9 toy cars. How many more cars did Sam have than John. _____

In this booklet you will learn how to do problems like this.

Answers

There is a prerecorded tape for this booklet.

6

Solve these problems.

The Smith family went on a vacation. They spent four days in Pittsburgh and 9 days in Washington, D. C. How many days were they gone?

Work Space

$$\begin{array}{r} 4 \text{ days} \\ + 9 \text{ days} \\ \hline 13 \text{ days} \end{array}$$

John's boat was 16 feet long. Joe's boat was 7 feet long. How much longer was John's boat than Joe's boat?

$$\begin{array}{r} 16 \text{ ft.} \\ - 7 \text{ ft.} \\ \hline 9 \text{ ft.} \end{array}$$

Jan had 15 quarts of milk for her party. She used 6 quarts. How many quarts of milk are left?

$$\begin{array}{r} 15 \text{ quarts} \\ - 6 \text{ quarts} \\ \hline 9 \text{ quarts} \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	1

Solve these problems.

Betsy had 18¢. She decided to buy a card for her mother. The card cost 9¢. How much did Betsy have left?

Work Space

$$\begin{array}{r} 18¢ \\ - 9¢ \\ \hline 9¢ \end{array}$$

Jane found 13 quarters. She gave 7 of them to Sally. How many quarters did Jane have left?

$$\begin{array}{r} 13 \text{ quarters} \\ - 7 \text{ quarters} \\ \hline 6 \text{ quarters} \end{array}$$

It took Joe 13 minutes to walk to school. It took Jim 7 minutes. How much longer did it take Joe than Jim?

$$\begin{array}{r} 13 \text{ minutes} \\ - 7 \text{ minutes} \\ \hline 6 \text{ minutes} \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	4

Solve these problems.

Work Space

Jan had 8 dozen blocks and Sue had 8 dozen blocks. How many blocks did both girls have together?

$$\begin{array}{r} 8 \text{ dz.} \\ + 8 \text{ dz.} \\ \hline 16 \text{ dz.} \end{array}$$

Dick had 8 nickels and Tom had 7 nickels. How many nickels did both boys have together?

$$\begin{array}{r} 8 \text{ nickels} \\ + 7 \text{ nickels} \\ \hline 15 \text{ nickels} \end{array}$$

Jim had 15¢. He bought some ribbon for 6¢. How many cents does he have left?

$$\begin{array}{r} 15¢ \\ - 6¢ \\ \hline 9¢ \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	3

Solve these problems.

Sally has lived on Oak Street for 9 months. Jack has lived there for 7 months. How many more months than Jack has Sally lived on Oak Street?

Work Space

$$\begin{array}{r} 9 \text{ months} \\ - 7 \text{ months} \\ \hline 2 \text{ months} \end{array}$$

The girls had 6 nickels and the boys had 8 nickels. How many nickels did the children have together?

$$\begin{array}{r} 6 \text{ nickels} \\ + 8 \text{ nickels} \\ \hline 14 \text{ nickels} \end{array}$$

The Brown family left on their vacation. They drove 7 hours the first day and 7 hours the second day. How many hours did they drive in the two days all together?

$$\begin{array}{r} 7 \text{ hours} \\ + 7 \text{ hours} \\ \hline 14 \text{ hours} \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	4

Solve these problems.

For the birthday party, mother bought 13 quarts of ice cream. The children ate 9 quarts. How many quarts of ice cream are left?

Work Space

$$\begin{array}{r} 13 \text{ qts.} \\ - 9 \text{ qts.} \\ \hline 4 \text{ qts.} \end{array}$$

Dick had a board 12 inches long. He sawed off 8 inches. How long is the board now?

$$\begin{array}{r} 12 \text{ inches} \\ - 8 \text{ inches} \\ \hline 4 \text{ inches} \end{array}$$

Sue bought a cupcake for 9¢ and an apple for 5¢. How much money did she spend all together?

$$\begin{array}{r} + 9¢ \\ + 5¢ \\ \hline 14¢ \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	5

Solve these problems.

Work Space

Joe had 3 yards of rope. Sam had 6 yards. How many yards of rope do the boys have together?

$$\begin{array}{r} 3 \text{ yards} \\ + 6 \text{ yards} \\ \hline 9 \text{ yards} \end{array}$$

Mary had 14 dimes. She gave 9 of them to Alice. How many dimes did Mary have then?

$$\begin{array}{r} 14 \text{ dimes} \\ - 9 \text{ dimes} \\ \hline 5 \text{ dimes} \end{array}$$

Mary needs 12¢ to buy a card. She has 5¢. How many more cents does Mary need?

$$\begin{array}{r} 12¢ \\ - 5¢ \\ \hline 7¢ \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	6

Solve these problems.

Sally had 12 minutes to do her work. She was finished in 5 minutes. How many more minutes could she have worked?

Work Space

$$\begin{array}{r} 12 \text{ minutes} \\ - 5 \text{ minutes} \\ \hline 7 \text{ minutes} \end{array}$$

Mr. Jones bought 17 dozen peaches. He sold 8 dozen in his store. How many more dozen does he still have to sell?

$$\begin{array}{r} 17 \text{ doz} \\ - 8 \text{ doz} \\ \hline 9 \text{ doz} \end{array}$$

Karen has 18 pennies. Tom had 9 pennies. How many more pennies than Tom does Karen have?

$$\begin{array}{r} 18 \text{ pennies} \\ - 9 \text{ pennies} \\ \hline 9 \text{ pennies} \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	7

Solve these problems.

Sally practiced the piano for 6 hours. Jan practiced for 4 hours. How much longer did Sally practice than Jane?

Work Space

$$\begin{array}{r} 6 \text{ hrs.} \\ - 4 \text{ hrs} \\ \hline 2 \text{ hrs} \end{array}$$

Dick had 14 pennies. He bought a ball for 9 pennies. How many pennies did he have left?

$$\begin{array}{r} 14 \text{ pennies} \\ - 9 \text{ pennies} \\ \hline 5 \text{ pennies} \end{array}$$

Mother had 16 feet of old material. The girls used seven feet for play clothes. How much material was left?

$$\begin{array}{r} 16 \text{ ft.} \\ - 7 \text{ ft.} \\ \hline 9 \text{ ft.} \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	8

Solve these problems.

Ann had a piece of ribbon 15 inches long. She only needed 8 inches. How much ribbon was left?

Work Space

$$\begin{array}{r} 15 \text{ inches} \\ - 8 \text{ inches} \\ \hline 7 \text{ inches} \end{array}$$

Jim had 9 pints of milk. He bought 9 more pints. How many pints of milk does he have?

$$\begin{array}{r} 9 \text{ pints} \\ + 9 \text{ pints} \\ \hline 18 \text{ pints} \end{array}$$

Betsy went to the store to buy some ribbon and paper to wrap her Mother's Day gift. The ribbon cost 9 cents, and the paper cost 8 cents. How much did she spend?

$$\begin{array}{r} 9¢ \\ + 8¢ \\ \hline 17¢ \end{array}$$

For extra practice, do Pages 11 and 12.

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	9

CET I

Solve these word problems.

Jan had 16 pennies. She spent 9 on some candy. How many pennies did she have left?

_____ pennies

Mary bought 3 candy bars at the store. Jane bought 7 candy bars. How many candy bars did they buy altogether?

_____ candy bars

Betty had 14 gum balls. She gave 8 to her little brother. How many did she have left?

_____ gum balls

C I R C L E C O R R E C T B O X	TL. PTS.	
	3	100%
	NO. OF PTS.	%
	2	67
	1	33

Put > or < in the circle to make a true number sentence.

6 hours + 8 hours



18 hours - 6 hours

5 pennies - 3 pennies



5 pennies + 3 pennies

7 days + 4 days



6 days + 6 days

C I R C L E C O R R E C T B O X	TL. PTS.	
	3	100%
	NO. OF PTS.	%
	2	67
	1	33

LEVEL	UNIT	SKILL	PAGE
C	07	3	10

Solve these problems.

Work Space

It took Dick 13 days to build a tree house. Fred helped him for 5 days. How many days did he work by himself?

$$\begin{array}{r} 13 \text{ days} \\ - 5 \text{ days} \\ \hline 8 \text{ days} \end{array}$$

One baby is 9 months old. Another baby is 4 months old. How old are both the babies together?

$$\begin{array}{r} 9 \text{ months} \\ + 4 \text{ months} \\ \hline 13 \text{ months} \end{array}$$

Dick is 17 years old. His brother is 8 years old. How much older is Dick than his brother?

$$\begin{array}{r} 17 \text{ years} \\ - 8 \text{ years} \\ \hline 9 \text{ years older} \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	11 ₆₃

Solve these problems.

Room 5 had 18 pints of milk. 9 children didn't want their milk. How many pints of milk were left?

Work Space

$$\begin{array}{r} 18 \text{ pints} \\ - 9 \text{ pints} \\ \hline 9 \text{ pints} \end{array}$$

Jane had saved 16 yards of string. She lost 9 yards. How much does she have left?

$$\begin{array}{r} 16 \text{ yds.} \\ - 9 \text{ yds.} \\ \hline 7 \text{ yds} \end{array}$$

Sally had 17 quarters. She bought a doll for 6 quarters. How many quarters does she have now?

$$\begin{array}{r} 17 \text{ quarters} \\ - 6 \text{ quarters} \\ \hline 11 \text{ quarters} \end{array}$$

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
C	07	3	12

CET II

Solve these problems.

1. Mary had 5¢. She and her brother bought a candy bar for 10¢. How much did her brother pay?

_____¢

2. Billy had 10 feet of track for his trains. His father gave him 6 feet more. How much track does he have now?

_____feet

3. Ann has 5 storybooks. She has read 3 of them. How many books does she have left to read?

_____books

C I R C L E C O R R E C T B O X	TL. PTS.	
	3	100%
	NO. OF PTS.	%
	2	67
	1	33

Put > for < in the circle to make a true number sentence.

7 days + 7 days



14 days - 4 days

12 circles - 4 circles



14 circles - 8 circles

3 eggs + 3 eggs



12 eggs - 4 eggs

C I R C L E C O R R E C T B O X	TL. PTS.	
	3	100%
	NO. OF PTS.	%
	2	67
	1	33

LEVEL	UNIT	SKILL	PAGE
C	07	3	13

LEVEL C, COMBINATION OF PROCESSES, SKILL 3

OBJECTIVE: Solves one-step word problems involving adding and subtracting values in money, time, and measurement from Level B. Sums to 18.

STANDARD TEACHING SEQUENCE

Page	Supplementary Material
1. Solves word problems.	
2. Solves word problems.	
3. Solves word problems.	
4. Solves word problems.	
5. Solves word problems.	
6. Solves word problems.	
7. Solves word problems.	
8. Solves word problems.	
9. Solves word problems.	11, 12
10. CET I.	
CET II.	13

There is a prerecorded tape for this booklet.

Circle pages that are to be done.

Standard Teaching Sequence, Con't

1967 - 68

Sequence No. Prescription No.

14R

Studies 4 rules for solving word problems.

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1965 <u>Two By Two</u> (Grade 2)		30, 31, 34, 47, 114 - 116
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> (GR. 3)	12	13

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____



MATHEMATICS CURRICULUM STAFF

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL C

COMBINATION OF PROCESSES (07)

SKILL 4

Based upon materials developed by The Mathematics Curriculum Staff,
Learning Research and Development Center, University of Pittsburgh; Joseph
I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of
Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Write the correct sign $>$ or $<$ in the

Jane had 4 cents. Bobby had 6 cents. Who had more money?

6 cents 4 cents.

Answer

6 cents $>$ 4 cents

Write the sums in each box. Then fill in the blanks and write the correct sign, < or >, in each circle. Look at the sentences you have made.

< "less than"
> "greater than"

$$15 \text{ } \textcircled{<} \text{ } 8 + 8$$

$$8 + 8 = \boxed{16}$$

The true sentence is 15 $\textcircled{<}$ 16.

$$9 \text{ } \textcircled{<} \text{ } 6 + 7$$

$$6 + 7 = \boxed{13}$$

The true sentence is 9 $\textcircled{<}$ 13.

$$12 \text{ } \textcircled{>} \text{ } 3 + 4$$

$$3 + 4 = \boxed{7}$$

The true sentence is 12 $\textcircled{>}$ 7.

$$9 \text{ } \textcircled{<} \text{ } 6 + 5$$

$$6 + 5 = \boxed{11}$$

The true sentence is 9 $\textcircled{<}$ 11.

For extra practice, do Page 13.

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
C	07	4	1 70

Write $<$ or $>$ in each circle to make a true sentence.

$$7 - 2 = 5$$

$$5 + 1 = 6$$

$$7 - 2 \quad \bigcirc \quad 5 + 1$$

$$15 - 8 = 7$$

$$9 + 4 = 13$$

$$6 + 3 = 9$$

$$6 + 8 = 14$$

$$15 - 8 \quad \bigcirc \quad 6 + 3$$

$$9 + 4 \quad \bigcirc \quad 6 + 8$$

$$9 - 2 \quad \bigcirc \quad 3 + 2$$

$$5 + 3 \quad \bigcirc \quad 8 + 1$$

$$3 + 7 \quad \bigcirc \quad 8 + 4$$

$$6 + 7 \quad \bigcirc \quad 9 + 3$$

$$7 + 2 \quad \bigcirc \quad 4 + 6$$

$$5 + 2 \quad \bigcirc \quad 10 - 2$$

For extra practice, do Page 14.

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
C	07	4	2

Write $<$ or $>$ in each circle to make true sentences. Draw lines between sentences which say the same thing.

$6 \text{ (} < \text{)} 4 + 7$ $7 \text{ (} > \text{)} 4$
 $7 \text{ (} > \text{)} 5 - 1$ $6 \text{ (} < \text{)} 11$

$6 + 7 \text{ (} > \text{)} 3 + 7$ $12 \text{ (} > \text{)} 6$
 $12 - 2 \text{ (} < \text{)} 14 - 1$ $13 \text{ (} > \text{)} 10$
 $7 + 5 \text{ (} > \text{)} 9 - 3$ $10 \text{ (} < \text{)} 13$

For extra practice, do Page 15.

TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
C	07	4	3

Write $<$ or $>$ in each circle to make true sentences.

12 pennies $\bigcirc$ 4 pennies + 3 pennies.

11 inches $\bigcirc$ 6 inches + 6 inches.

9 feet $\bigcirc$ 3 feet + 5 feet.

2 minutes + 6 minutes $\bigcirc$ 14 minutes.

5 hours + 2 hours $\bigcirc$ 10 hours.

4 weeks - 3 weeks $\bigcirc$ 2 weeks.

7 days - 4 days $\bigcirc$ 6 days.

For extra practice, do Page 16.

TOTAL POINTS	NUMBER CORRECT
7	

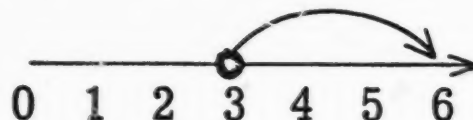
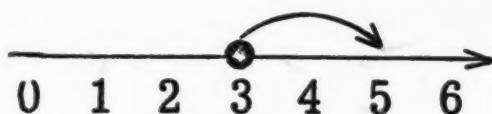
LEVEL	UNIT	SKILL	PAGE
C	07	4	4

Look at the number line.

Write = or $\neq$ in each circle.

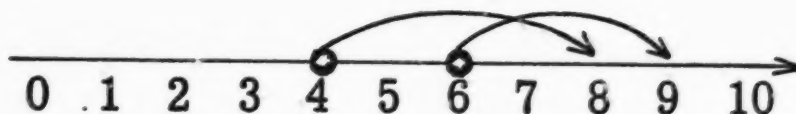
= "equal"

$\neq$ "not equal"



$$3 + 2 \text{ (---) } 5$$

$$3 + 3 \text{ (}\neq\text{) } 5$$



$$4 + 4 \text{ (}\neq\text{) } 6 + 3$$



$$3 + 3 \text{ (=) } 4 + 2$$

For extra practice, do Page 17.

TOTAL POINTS	NUMBER CORRECT
4	

LEVEL	UNIT	SKILL	PAGE
C	07	4	5

Write = or $\neq$ in each circle to make true sentences.

= "equal"

$\neq$ "not equal"

$$5 \text{ (} \neq \text{)} 4 + 1$$

$$3 + 2 \text{ (} \neq \text{)} 5 - 1$$

$$6 + 2 \text{ (} \neq \text{)} 5 + 4$$

$$7 + 1 \text{ (} = \text{)} 4 + 4$$

$$9 - 5 \text{ (} = \text{)} 3 + 1$$

$$5 + 2 \text{ (} = \text{)} 4 + 3$$

$$4 + 7 \text{ (} = \text{)} 6 + 5$$

$$6 + 1 \text{ (} \neq \text{)} 7 - 3$$

$$8 - 4 \text{ (} \neq \text{)} 9 - 3$$

$$9 + 3 \text{ (} \neq \text{)} 2 + 8$$

$$7 + 6 \text{ (} = \text{)} 10 + 3$$

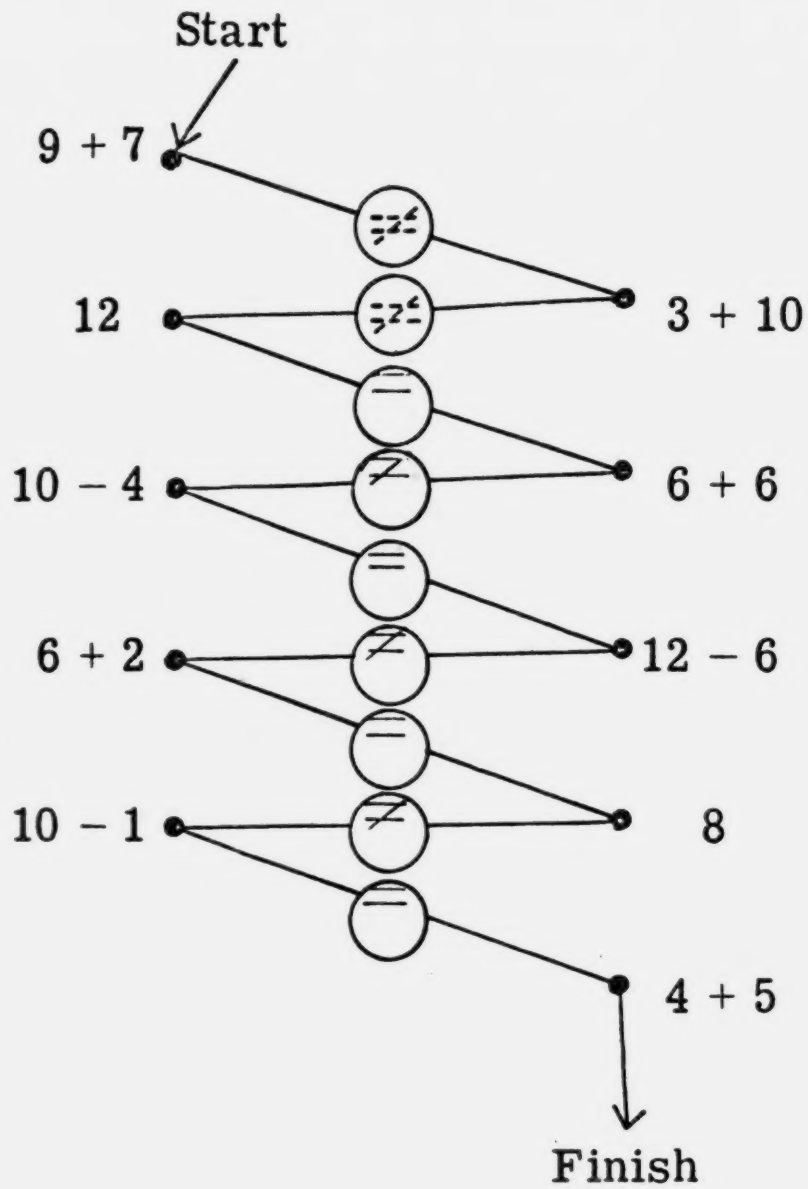
$$3 + 6 \text{ (} = \text{)} 10 - 1$$

For extra practice, do Page 18.

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
C	07	4	6

Write = or $\neq$ in each circle to make true sentences.



TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
C	07	4	7

Write = or $\neq$ in each circle to make true sentences.

= or $\neq$

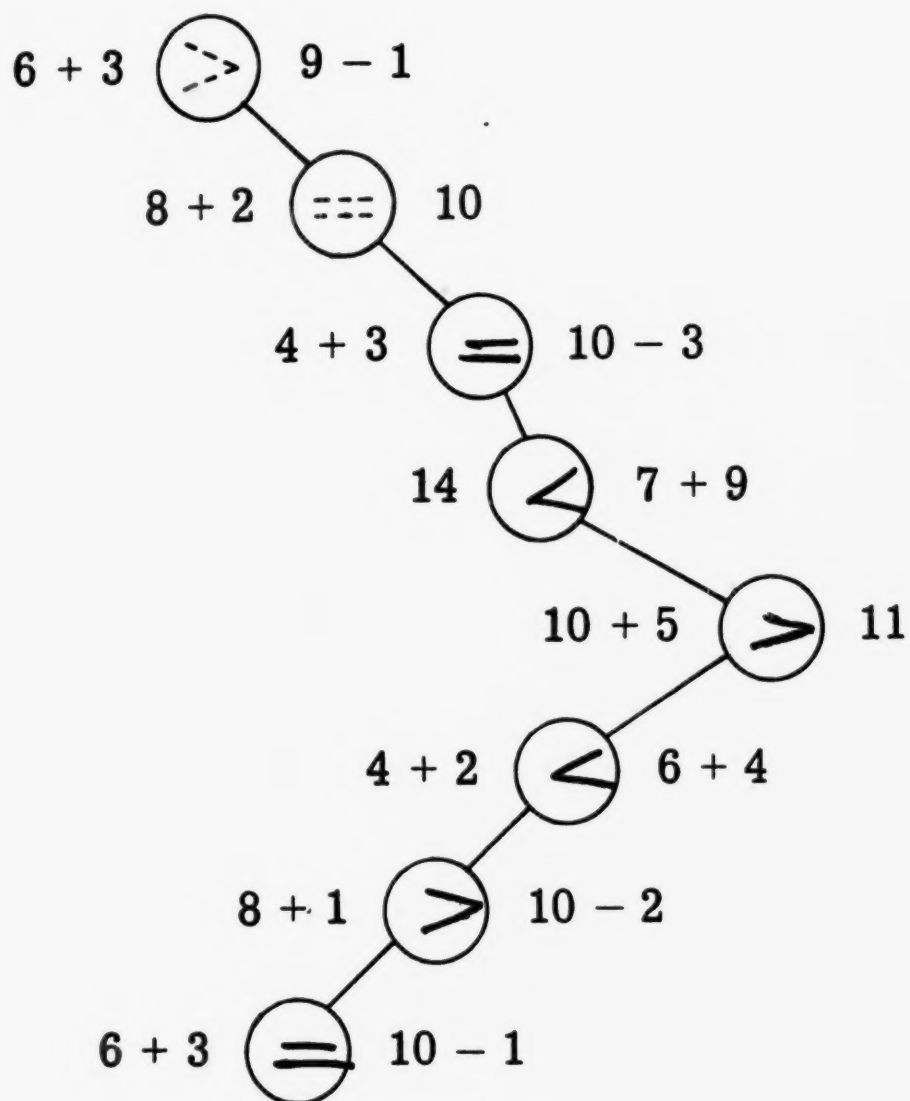
- (12 - 1) pennies $\neq$ 11 pennies
- (4 - 1) days $\neq$ (2 + 1) days
- (6 + 3) inches $\neq$ (4 + 5) inches
- (4 + 4) hours $\neq$ (10 - 3) hours
- 9 + 9 $\neq$ 10 + 8
- 8 + 3 $\neq$ 9 + 3
- (13 - 4) feet $\neq$ (6 + 4) feet

For extra practice, do Page 19.

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
C	07	4	8

Write $<$, $>$, or $=$ in each circle to make true sentences.



For extra practice, do Page 20.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
C	07	4	9

Write $<$, $>$, or $=$ in each circle to make true sentences.

$$13 - 3 \quad \bigcirc \quad 10$$

$$4 + 9 \quad \bigcirc \quad 7 + 9$$

$$7 + 6 \quad \bigcirc \quad 7 + 8$$

$$8 + 5 \quad \bigcirc \quad 5 + 8$$

$$4 + 3 \quad \bigcirc \quad 12 - 5$$

$$9 + 6 \quad \bigcirc \quad 4 + 10$$

$$3 + 3 \quad \bigcirc \quad 12 - 6$$

$$9 + 9 \quad \bigcirc \quad 12 + 2$$

For extra practice, do Page 21.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
C	07	4	10

Write $<$, $>$, or $=$ in each circle to make true sentences.

$$3 \text{ days} + 2 \text{ days} \text{ (} \text{---} \text{)} 5 \text{ days.}$$

$$6 + 3 \text{ (} \text{---} \text{)} 10 - 1.$$

$$5 \text{ miles} - 2 \text{ miles} \text{ (} < \text{)} 9 \text{ miles.}$$

$$(12 - 2) \text{ inches} \text{ (} \text{---} \text{)} 10 \text{ inches.}$$

$$6 \text{ weeks} \text{ (} > \text{)} (5 - 1) \text{ weeks.}$$

$$16 \text{ hours} \text{ (} > \text{)} (9 + 1) \text{ hours.}$$

$$3 + 3 \text{ (} \text{---} \text{)} 6.$$

$$9 \text{ feet} \text{ (} \text{---} \text{)} (6 + 3) \text{ feet.}$$

$$10 - 3 \text{ (} < \text{)} 6 + 2.$$

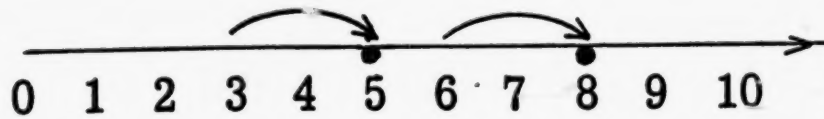
For extra practice, do Page 22.

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
C	07	4	11

Look at the number lines. Write the sums in the boxes.

Then write $<$ or $>$ in each circle to make true sentences.



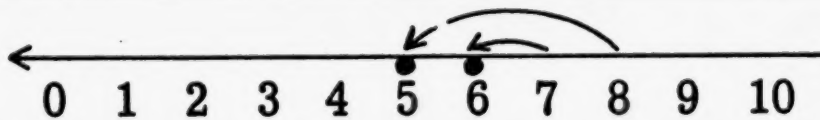
$$3 + 2 = \boxed{5} \quad 6 + 2 = \boxed{8}$$

$$3 + 2 \quad \textcircled{<} \quad 6 + 2$$



$$3 + 3 = \boxed{6} \quad 8 + 2 = \boxed{10}$$

$$3 + 3 \quad \textcircled{<} \quad 8 + 2$$



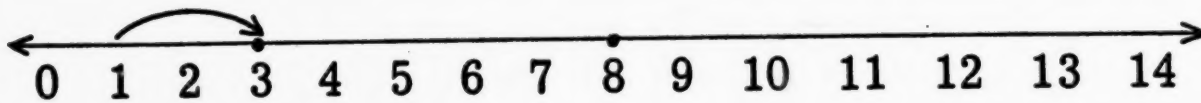
$$7 - 1 = \boxed{6} \quad 8 - 3 = \boxed{5}$$

$$7 - 1 \quad \textcircled{>} \quad 8 - 3$$

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
C	07	4	13

Look at the number line . Write $<$ or $>$ in each circle to make true sentences.



$$1 \quad \bigcirc \quad 7$$

$$5 \quad \bigcirc \quad 7$$

$$1 + 2 \quad \bigcirc \quad 7$$

$$4 - 1 \quad \bigcirc \quad 7$$

$$8 - 2 \quad \bigcirc \quad 7$$

$$10 \quad \bigcirc \quad 7$$

$$13 \quad \bigcirc \quad 7$$

$$6 + 8 \quad \bigcirc \quad 7$$

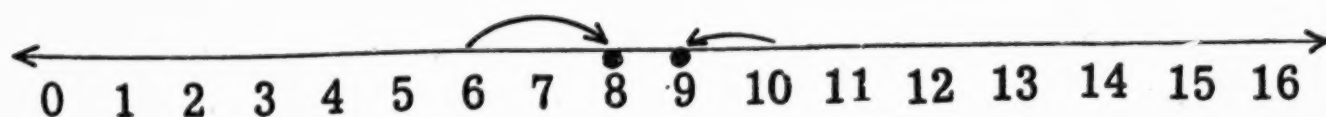
$$14 - 6 \quad \bigcirc \quad 7$$

$$10 - 1 \quad \bigcirc \quad 7$$

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
C	07	4	183

Look at the number line. Write $<$ or $>$ in each circle to make true sentences. Check your answer by finding the sums.



Write the sums.

$$10 - 1 \bigcirc 6 + 2$$

$$10 - 1 = \underline{9}$$

$$6 + 2 = \underline{8}$$

$$16 - 7 \bigcirc 8 + 2$$

$$16 - 7 = \underline{9}$$

$$8 + 2 = \underline{10}$$

$$8 + 2 \bigcirc 5 - 3$$

$$8 + 2 = \underline{10}$$

$$5 - 3 = \underline{2}$$

$$6 + 4 \bigcirc 6 - 4$$

$$6 + 4 = \underline{10}$$

$$6 - 4 = \underline{2}$$

$$0 + 9 \bigcirc 7 + 3$$

$$0 + 9 = \underline{9}$$

$$7 + 3 = \underline{10}$$

$$5 + 3 \bigcirc 4 + 2$$

$$5 + 3 = \underline{8}$$

$$4 + 2 = \underline{6}$$

TOTAL POINTS	NUMBER CORRECT
18	

LEVEL	UNIT	SKILL	PAGE
C	07	4	15

Write $<$ or $>$ in each circle to make true sentences.

$12 \bigcirc 6 + 3$

$7 \bigcirc 4 + 6$

$8 - 2 \bigcirc 9$

$9 \bigcirc 5 + 2$

$5 \bigcirc 6 - 2$

$12 \text{ pennies } \bigcirc 6 \text{ pennies} + 3 \text{ pennies.}$

$7 \text{ inches } \bigcirc 4 \text{ inches} + 6 \text{ inches.}$

$8 \text{ feet} - 2 \text{ feet } \bigcirc 9 \text{ feet.}$

$9 \text{ days } \bigcirc 5 \text{ days} + 2 \text{ days.}$

$5 \text{ hours } \bigcirc 6 \text{ hours} - 2 \text{ hours.}$

$12 \text{ days } \bigcirc 13 \text{ days.}$

$8 \text{ days } \bigcirc 7 \text{ days.}$

$9 \text{ days} + 2 \text{ days } \bigcirc 14 \text{ days.}$

TOTAL POINTS	NUMBER CORRECT
13	

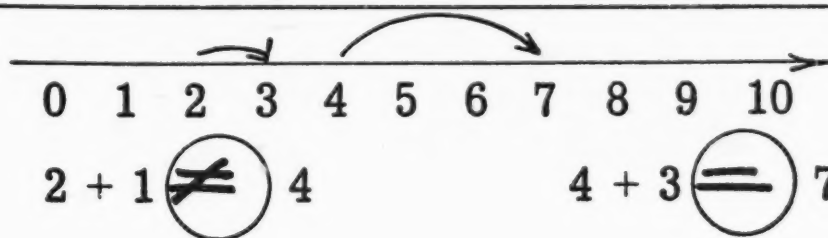
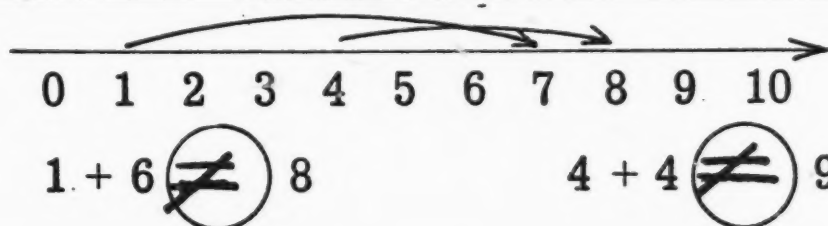
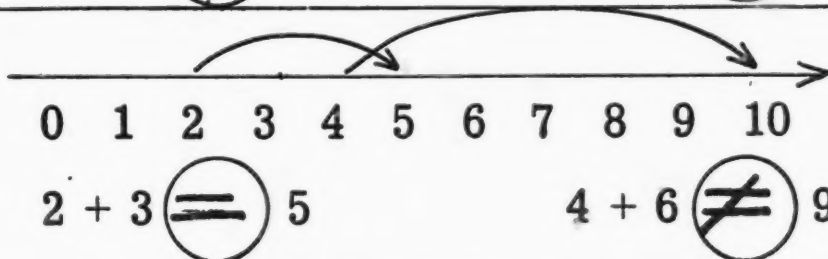
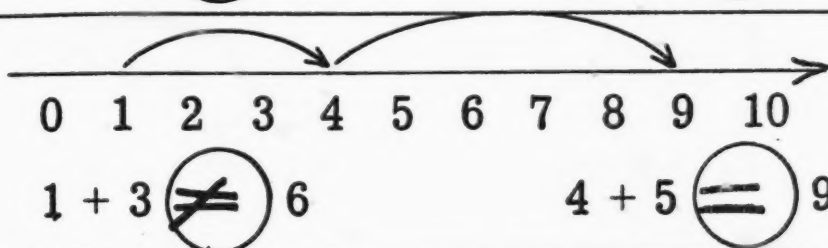
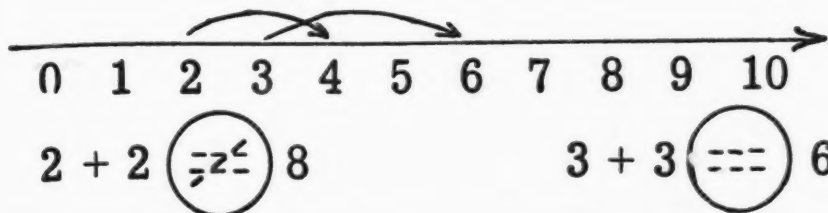
LEVEL	UNIT	SKILL	PAGE
C	07	4	16

Look at the number lines.

Write = or $\neq$ in each circle.

= equal

$\neq$ not equal



TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
C	07	4	17

Write the sums in the boxes. Write = or $\neq$ in the circles to make true number sentences.

$$8 + 1 = \boxed{9} \quad \boxed{=} \quad 9$$

$$11 - 2 = \boxed{9} \quad \boxed{\neq} \quad 10$$

$$4 + 3 = \boxed{7} \quad \boxed{\neq} \quad 5$$

$$3 + 5 = \boxed{8} \quad \boxed{=} \quad 8$$

$$4 + 5 = \boxed{9}$$

$$6 + 2 = \boxed{8}$$

$$4 + 5 \quad \boxed{\neq} \quad 6 + 2$$

$$7 + 1 = \boxed{8}$$

$$4 + 4 = \boxed{8}$$

$$7 + 1 \quad \boxed{=} \quad 4 + 4$$

$$3 + 3 = \boxed{6}$$

$$6 + 6 = \boxed{12}$$

$$3 + 3 \quad \boxed{\neq} \quad 6 + 6$$

TOTAL POINTS	NUMBER CORRECT
17	

LEVEL	UNIT	SKILL	PAGE
C	07	4	18

Write = or $\neq$ in each circle to make true sentences.

$12 \text{ } \bigcirc \text{ } 6 + 6$

$7 \text{ } \bigcirc \text{ } 3 + 2$

$8 - 2 \text{ } \bigcirc \text{ } 6$

$8 + 1 \text{ } \bigcirc \text{ } 6 + 1$

$5 \text{ } \bigcirc \text{ } 9 - 4$

$12 \text{ days } \bigcirc \text{ } 6 \text{ days} + 6 \text{ days.}$

$7 \text{ feet } \bigcirc \text{ } 3 \text{ feet} + 2 \text{ feet.}$

$8 \text{ inches} - 2 \text{ inches } \bigcirc \text{ } 6 \text{ inches.}$

$(8 + 1) \text{ hours } \bigcirc \text{ } (6 + 1) \text{ hours.}$

$5 \text{ dimes } \bigcirc \text{ } (9 - 4) \text{ dimes.}$

$5 + 3 \text{ } \bigcirc \text{ } 4 + 4$

$6 \text{ hours } \bigcirc \text{ } (3 + 4) \text{ hours.}$

$2 \text{ days } \bigcirc \text{ } (8 - 6) \text{ days.}$

$6 + 2 \text{ } \bigcirc \text{ } 8$

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
C	07	4	19

Write $<$, $>$, or $=$ to make true sentences and fill in the blanks.

$<$ "less than"

$>$ "greater than"

$=$ "equal"

4 $<$ 5 + 1

4 $<$ 6

4 + 2 $>$ 1 + 3

6 $>$ 4

4 + 1 $=$ 3 + 2

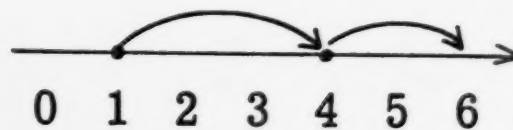
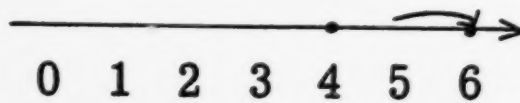
5 $=$ 5

6 + 3 $>$ 8

9 $>$ 8

(5 + 2) feet $=$ 7 feet.

7 feet $=$ 7 feet.



TOTAL POINTS	NUMBER CORRECT
17	

LEVEL	UNIT	SKILL	PAGE
C	07	4	20

Write $<$, $>$, or $=$ to make true sentence.

$<$ "less than"

$>$ "greater than"

$=$ "equal"

6 $\overset{\text{---}}{=}$ $5 + 1$

$2 + 3$ $\overset{\text{---}}{<}$ $7 - 1$

$8 + 2$ $>$ $4 + 5$

$3 + 3$ $<$ $4 + 4$

$10 - 5$ $\overset{\text{---}}{=}$ $9 - 4$

$6 + 6$ $<$ 13

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
C	07	4	21

Write $<$, $>$ or $=$ in each circle to make true sentences.

$<$ "less than"

$>$ "greater than"

$=$ "equal"

7 hours $\bigcirc$ 6 hours + 1 hour.

$(5 + 2)$ days $\bigcirc$ 4 days.

$7 + 2$ $\bigcirc$ 10.

$(3 + 2)$ inches $\bigcirc$ $(4 + 3)$ inches.

$(4 + 5)$ hours $\bigcirc$ $(6 + 3)$ hours.

$4 - 1$ $\bigcirc$ $9 - 6$.

$5 + 5$ $\bigcirc$ 10.

$6 + 3$ $\bigcirc$ $4 + 4$.

3 dimes $\bigcirc$ $(7 - 5)$ dimes.

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
C	07	4	22

CET II

Put = or $\neq$ in the circle.

$$7 \text{ inches} + 4 \text{ inches} \bigcirc 15 \text{ inches} - 4 \text{ inches.}$$

$$18 \text{ hours} - 12 \text{ hours} \bigcirc 2 \text{ hours} + 3 \text{ hours.}$$

$$3 \text{ bananas} - 2 \text{ bananas} \bigcirc 2 \text{ bananas} + 0 \text{ bananas.}$$

$$13\text{¢} + 2\text{¢} \bigcirc 7\text{¢} + 8\text{¢}$$

Put $<$, $>$, or $=$ in the circle.

$$17 \text{ feet} - 14 \text{ feet} \bigcirc 7 \text{ feet} + 4 \text{ feet.}$$

$$10 \text{ triangles} + 8 \text{ triangles} \bigcirc 17 \text{ triangles} - 0 \text{ triangles.}$$

$$9 \text{ minutes} - 3 \text{ minutes} \bigcirc 4 \text{ minutes} + 2 \text{ minutes.}$$

$$8\text{¢} - 4\text{¢} \bigcirc 4\text{¢} + 1\text{¢}$$

C	TL	PTS
8		100
NO OF		
PTS		
7		50
6		25
5		10
4		5
3		2
2		1
1		
0		
Box		

Put + or - in each circle to make a true number sentence.

$$7 \bigcirc 3 = 4$$

$$17 \bigcirc 14 = 3$$

$$15 \bigcirc 3 = 18$$

$$7 \bigcirc 4 = 11$$

C	TL	PTS
4		100
NO OF		
PTS		
3		75
2		50
1		25
0		
Box		

LEVEL	UNIT	SKILL	PAGE
C	07	4	23

LEVEL C, COMBINATION OF PROCESSES, SKILL 4

OBJECTIVE: Fills in $>$, $<$, $=$, $\neq$ for addition or subtraction expressions including units in money, time, and systems of measurement from Level B. Sums to 18. No conversion of units.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Writes sum and fills in $<$ or $>$ to make true sentences.	13
2.	Fills in $>$ or $<$ for addition and subtraction problems.	14
3.	Fills in $>$ or $<$ for addition and subtraction problems and matches statements which say the something.	15
4.	Fills in $>$ or $<$ for statements using units of measurement, time, or money.	16
5.	Fills in $=$ or $\neq$ using number line.	17
6.	Fills in $=$ or $\neq$ for addition and subtraction problems.	18
7.	Fills in $=$ or $\neq$ for addition and subtraction problems.	
8.	Fills in $=$ or $\neq$ for statements using units of measurement, time, or money.	19
9.	Fills in $>$, $<$, or $=$ for addition and subtraction problems.	20
10.	Fills in $>$, $<$, or $=$ for addition and subtraction problems.	21
11.	Fills in $>$, $<$, or $=$ for statements using units of measurement or time.	22
12.	CET I.	
	CET II.	23

Circle pages that are to be done.

Standard Teaching Sequence, Con't

1967 - 68

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1965 <u>One By One</u> (Grade 1)		144, 153
Harcourt, Brace & World, 1965 <u>Two By Two</u> (Grade 2)		16, 110

100

Standard Teaching Sequence, Con't.

1967 - 68

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1965 <u>Two by Two</u> (Grade 2)		32, 48, 52, 104, 139
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 3		139, 198, 239
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 4		14, 263

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____



Mathematics Curriculum Staff

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL C

COMBINATION OF PROCESSES (07)

SKILL 5

Based upon materials developed by The Mathematics Curriculum Staff,
Learning Research and Development Center, University of Pittsburgh; Joseph
I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of
Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

You should be able to write $=$ or $\neq$ in the circle to make a true sentence.

$$2 + 3 \bigcirc 5 + 0$$

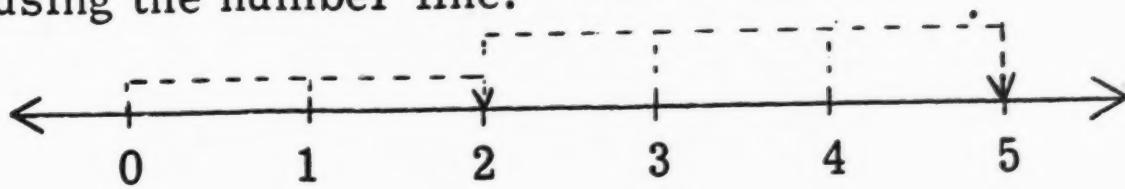
Write $+$ or $-$ in the circle to make a true sentence.

$$6 \bigcirc 2 = 8$$

Answers

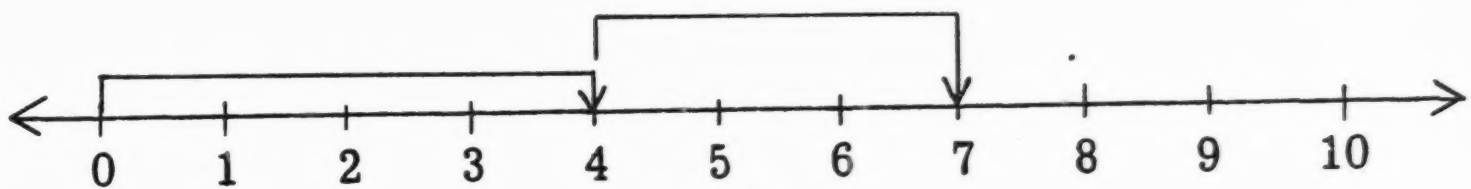
$=, -$

Add, using the number line.



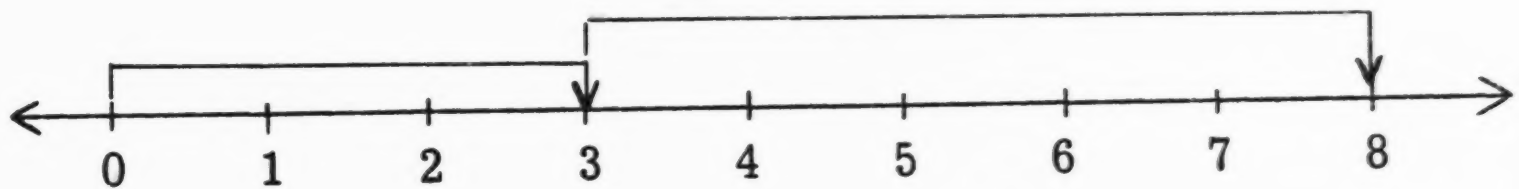
The number line shows that

$$2 + 3 = \underline{5}.$$



The number line shows that

$$4 + \underline{3} = 7.$$



The number line shows that

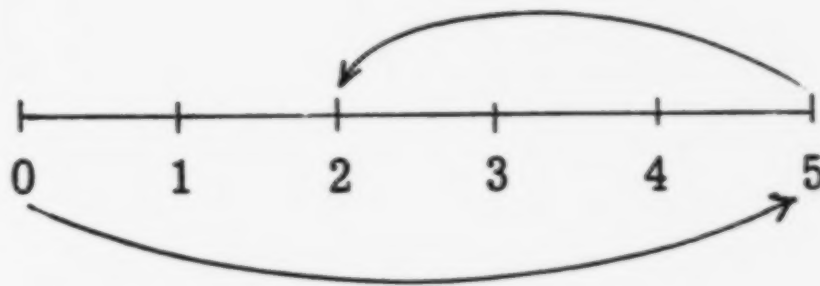
$$\underline{3} + \underline{5} = \underline{\quad}$$

For extra practice, do Page 12.

TOTAL POINTS	NUMBER CORRECT
5	

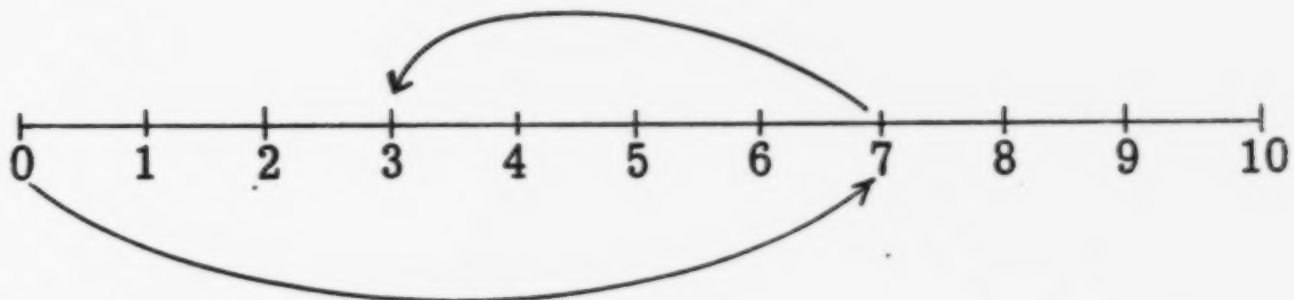
LEVEL	UNIT	SKILL	PAGE
C	07	5	1

Subtract using the number line.



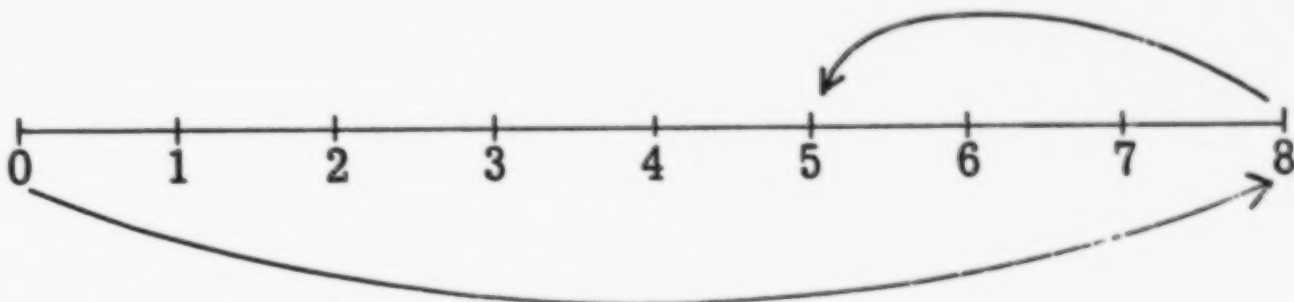
The number line shows that

$$5 - 3 = \underline{2}.$$



The number line shows that

$$7 - \underline{4} = 3.$$



The number line shows that

$$\underline{8} - \underline{3} = \underline{5}$$

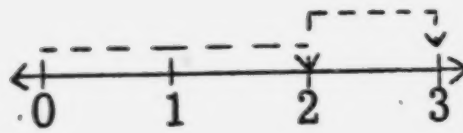
For extra practice, do Page 13.

TOTAL POINTS	NUMBER CORRECT
5	

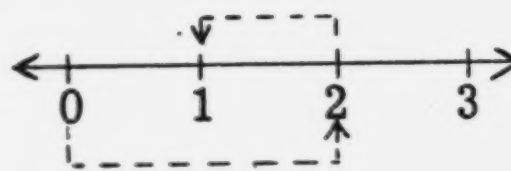
LEVEL	UNIT	SKILL	PAGE
C	07	5	2

Write + or - in the circle to show the jumps on the number line.

$$2 \bigcirc 1 = 3$$



$$2 \bigcirc 1 = 1$$



Write + or - in each circle to make true sentences.

$$3 \bigcirc 1 = 4$$

$$3 \bigcirc 1 = 2$$

$$1 \bigcirc 1 = 2$$

$$1 \bigcirc 1 = 0$$

$$3 \bigcirc 2 = 5$$

$$3 \bigcirc 2 = 1$$

$$4 \bigcirc 2 = 2$$

$$4 \bigcirc 2 = 6$$

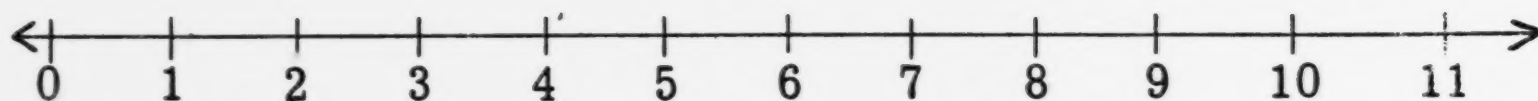
For extra practice, do Page 14.

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
C	07	5	3

Write + or - in each circle to make true sentences.

Look at the number line.



$$4 \text{ (} \div \text{) } 4 = 8$$

$$4 \text{ (} - \text{) } 4 = 0$$

$$6 \text{ (} - \text{) } 3 = 3$$

$$6 \text{ (} + \text{) } 3 = 9$$

$$8 \text{ (} - \text{) } 7 = 1$$

$$2 \text{ (} + \text{) } 7 = 9$$

$$8 \text{ (} - \text{) } 4 = 4$$

$$6 \text{ (} + \text{) } 5 = 11$$

$$2 \text{ (} + \text{) } 6 = 8$$

$$7 \text{ (} - \text{) } 4 = 3$$

$$5 \text{ (} + \text{) } 4 = 9$$

$$8 \text{ (} + \text{) } 2 = 10$$

$$3 \text{ (} - \text{) } 3 = 0$$

$$9 \text{ (} - \text{) } 4 = 5$$

For extra practice, do Page 15.

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
C	07	5	4

Write + or - in each circle to make true sentences.

$$4 \text{ (} + \text{) } 5 = 9$$

$$6 \text{ (} + \text{) } 4 = 10$$

$$9 \text{ (} + \text{) } 6 = 15$$

$$16 \text{ (} - \text{) } 8 = 8$$

$$9 \text{ (} + \text{) } 3 = 12$$

$$6 \text{ (} + \text{) } 7 = 13$$

$$13 \text{ (} - \text{) } 4 = 9$$

$$12 \text{ (} - \text{) } 3 = 9$$

$$4 \text{ (} + \text{) } 7 = 11$$

$$14 \text{ (} - \text{) } 9 = 5$$

$$13 \text{ (} - \text{) } 6 = 7$$

$$9 \text{ (} + \text{) } 4 = 13$$

$$9 \text{ (} + \text{) } 7 = 16$$

TOTAL POINTS	NUMBER CORRECT
13	

LEVEL	UNIT	SKILL	PAGE
C	07	5	5

Write + or - in the circle to make true sentences.

$$16 = 9 \text{ } \textcircled{-} \text{ } 7$$

$$14 = 8 \text{ } \textcircled{+} \text{ } 6$$

$$12 = 7 \text{ } \textcircled{+} \text{ } 5$$

$$13 = 10 \text{ } \textcircled{+} \text{ } 3$$

$$14 \text{ } \textcircled{-} \text{ } 8 = 6$$

$$8 = 10 \text{ } \textcircled{-} \text{ } 2$$

$$7 \text{ } \textcircled{+} \text{ } 5 = 12$$

$$10 = 13 \text{ } \textcircled{-} \text{ } 3$$

$$10 \text{ } \textcircled{-} \text{ } 3 = 7$$

$$9 = 8 \text{ } \textcircled{+} \text{ } 1$$

$$8 \text{ } \textcircled{+} \text{ } 4 = 12$$

$$14 \text{ } \textcircled{-} \text{ } 6 = 8$$

$$10 = 6 \text{ } \textcircled{+} \text{ } 4$$

$$10 \text{ } \textcircled{-} \text{ } 3 = 7$$

$$12 = 6 \text{ } \textcircled{+} \text{ } 6$$

For extra practice, do Page 16.

TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
C	07	5	6

Write + or - to make true sentences.

$$18 \bigcirc 9 = 9$$

$$5 = 14 \bigcirc 9$$

$$15 \bigcirc 8 = 7$$

$$14 \bigcirc 7 = 7$$

$$10 \bigcirc 5 = 15$$

$$12 \bigcirc 3 = 9$$

$$9 \bigcirc 8 = 17$$

$$9 \bigcirc 6 = 15$$

$$18 = 12 \bigcirc 6$$

$$15 = 7 \bigcirc 8$$

$$9 \bigcirc 5 = 14$$

$$12 \bigcirc 6 = 6$$

For extra practice, do Page 17.

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
C	07	5	7

Complete the number name for 5 by writing + or - in the circles. Write the sum or difference in the blanks.

$$6 - 1 = 3 \text{ } \textcircled{-} \text{ } 2$$

$$\underline{5} = \underline{5}$$

$$3 \text{ } \textcircled{-} \text{ } 2 \left. \begin{array}{l} 6 - 1 \\ 3 \end{array} \right\} 5$$

Complete the number name for 7 by writing + or - in the circle. Fill in the blanks.

$$5 + 2 = 4 \text{ } \textcircled{+} \text{ } 3$$

$$\underline{7} = \underline{7}$$

$$4 \text{ } \textcircled{+} \text{ } 3 \left. \begin{array}{l} 5 + 2 \\ 4 \end{array} \right\} 7$$

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
C	07	5	8

Write + or - in each circle to make true sentences and fill in the blanks.

$$3 \text{ } \bigcirc \text{ } 2 = 5 - 0$$

$$\underline{5} = \underline{5}$$

$$4 + 9 = 7 \text{ } \bigcirc \text{ } 6$$

$$\underline{13} = \underline{13}$$

$$8 \text{ } \bigcirc \text{ } 4 = 6 - 2$$

$$\underline{4} = \underline{4}$$

$$8 \text{ } \bigcirc \text{ } 1 = 4 + 5$$

$$\underline{9} = \underline{9}$$

$$5 + 5 = 13 \text{ } \bigcirc \text{ } 3$$

$$\underline{10} = \underline{10}$$

TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
C	07	5	9

Write + or - in each circle and fill in the blanks.

$$9 \text{ (---) } 3 = 3 + 3$$

$$\underline{6} = \underline{6}$$

$$6 \text{ (+) } 1 = 3 + 4$$

$$\underline{7} = \underline{7}$$

$$10 \text{ (-) } 1 = 6 + 3$$

$$\underline{9} = \underline{9}$$

$$9 \text{ (-) } 6 = 2 + 1$$

$$\underline{3} = \underline{3}$$

$$7 \text{ (+) } 5 = 12 + 0$$

$$\underline{12} = \underline{12}$$

$$9 + 7 = 17 \text{ (-) } 1$$

$$\underline{16} = \underline{16}$$

$$5 + 3 = 16 \text{ (-) } 8$$

$$\underline{8} = \underline{8}$$

$$5 \text{ (+) } 2 = 12 - 5$$

$$\underline{7} = \underline{7}$$

TOTAL POINTS	NUMBER CORRECT
24	

LEVEL	UNIT	SKILL	P
C	07	5	10

CET I

Put + or - in the circle.

$$4 \bigcirc 6 = 10$$

$$13 \bigcirc 8 = 5$$

$$3 \bigcirc 6 = 9$$

$$8 \bigcirc 4 = 12$$

$$9 \bigcirc 0 = 9$$

$$7 \bigcirc 6 = 13$$

$$14 \bigcirc 6 = 8$$

$$12 \bigcirc 7 = 5$$

$$17 \bigcirc 8 = 9$$

$$6 \bigcirc 7 = 13$$

C I R C L E	TL. PTS	
	10	100%
C O R R E C T	NO. OF PTS.	
	9	90
	8	80
	7	70
	6	60
	5	50
	4	40
	3	30
	2	20
	1	10
B O X		

Fill in the circle to make a true number sentence.

$$6 + 7 = 16 - \bigcirc$$

$$14 - 6 = \bigcirc + 3$$

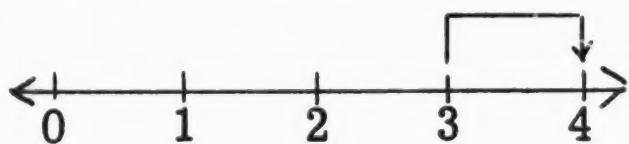
$$\bigcirc - 7 = 4 + 4$$

$$6 + \bigcirc = 8 + 7$$

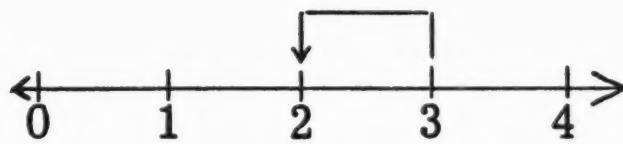
C I R C L E	TL. PTS	
	4	100%
C O R R E C T	NO. OF PTS.	
	3	75
	2	50
	1	25
B O X		

LEVEL	UNIT	SKILL	PAGE
C	07	5	11

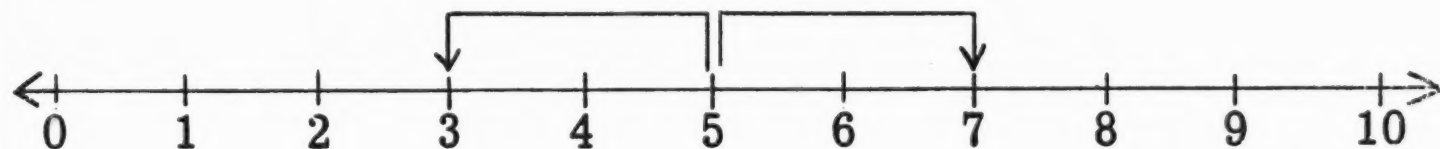
Use number lines and fill in the circles to make true sentences.



$$3 \bigcirc 1 = 4$$

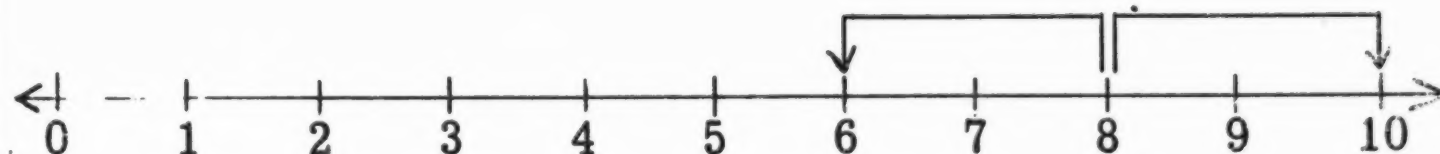


$$3 \bigcirc 1 = 2$$



$$5 \bigcirc 2 = 3$$

$$5 \bigoplus 2 = 7$$



$$8 \bigoplus 2 = 10$$

$$8 \bigcirc 2 = 6$$

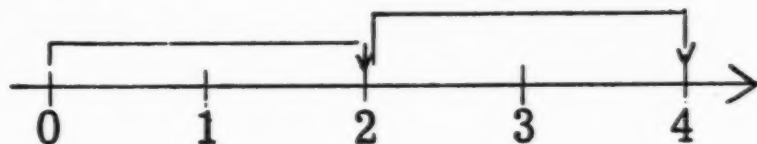
TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
C	07	5	

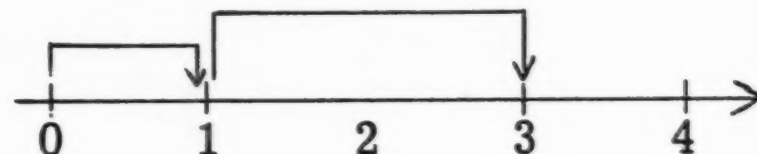
Write + or - in each circle to make true sentences.

Look at the number line.

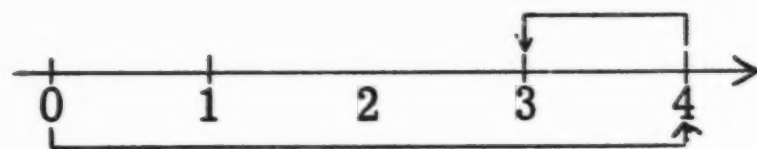
2 $\bigcirc$ 2 = 4



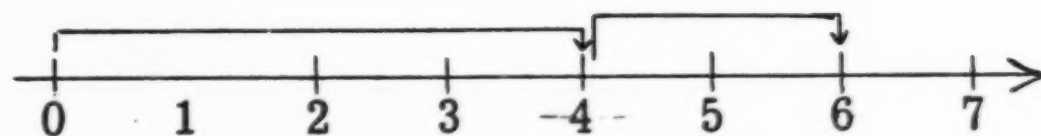
1 $\bigcirc$ 2 = 3



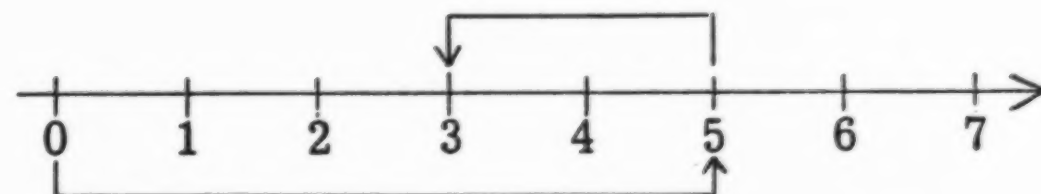
4 $\bigcirc$ 1 = 3



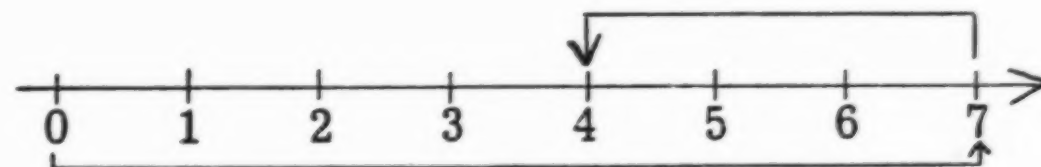
4 $\bigcirc$ 2 = 6



5 $\bigcirc$ 2 = 3



7 $\bigcirc$ 3 = 4



TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
C	07	5	13

Circle the correct sign in each of the number sentences below.

$$9 + \textcircled{-} 2 = 7$$

$$9 \textcircled{+} 9 = 18$$

$$8 + \textcircled{-} 2 = 6$$

$$7 + \textcircled{-} 2 = 5$$

$$3 \textcircled{+} 2 = 5$$

$$9 \textcircled{+} 7 = 16$$

$$4 \textcircled{+} 3 = 7$$

$$2 \textcircled{+} 4 = 6$$

$$1 \textcircled{+} 2 = 3$$

$$6 \textcircled{+} 6 = 12$$

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
C	07	5	14

Look at the pictures and write + or - in the circles to make true sentences.



$$7 \text{ (---) } 3 = 4$$

$$4 \text{ (+) } 3 = 7$$

$$7 \text{ (-) } 4 = 3$$



$$9 \text{ (-) } 2 = 7$$

$$7 \text{ (+) } 2 = 9$$

$$9 \text{ (-) } 7 = 2$$



$$7 \text{ (+) } 3 = 10$$

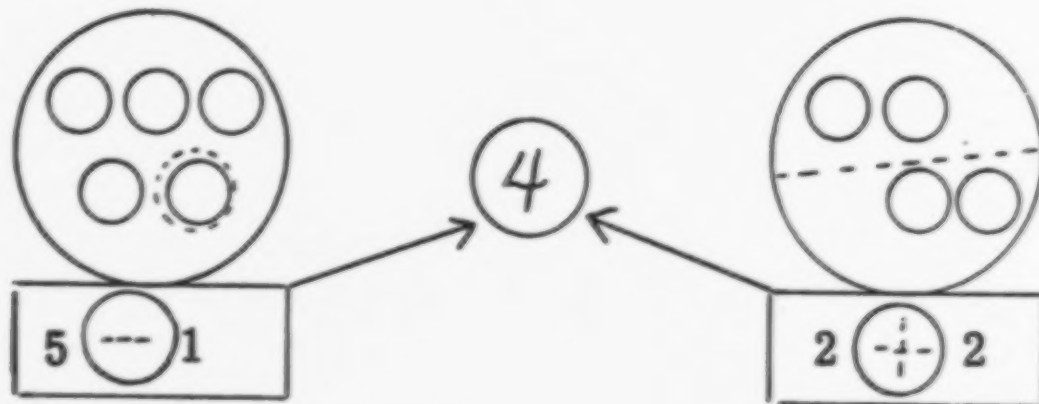
$$10 \text{ (-) } 3 = 7$$

$$10 \text{ (-) } 7 = 3$$

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
C	07	5	15

Write + or - in the circle to make a true number sentence.



$$5 \text{ (circle with } - \text{)} 1 = 4$$

$$2 \text{ (circle with } + \text{)} 2 = 4$$

$$5 - 1 = 2 \text{ (circle with } + \text{)} 2$$

In a true number sentence, each side of the = sign must be a name for the same number.

TOTAL POINTS	NUMBER CORRECT
5	

LEVEL	UNIT	SKILL	PAGE
C	07	5	16

Write + or - to make true sentences and fill in the blanks.

$$6 \text{ } \bigcirc \text{ } 3 = 9 = 7 + 2$$

$$4 \text{ } \bigcirc \text{ } 2 = 6 = 3 + 3$$

$$3 \text{ } \bigcirc \text{ } 2 = 1 = 0 + 1$$

$$5 \text{ } \bigcirc \text{ } 2 = 7 = 8 - 1$$

$$7 \text{ } \bigcirc \text{ } 1 = 8 + 0$$

$$\underline{8} = \underline{8}$$

$$6 \text{ } \bigcirc \text{ } 2 = 2 + 2$$

$$\underline{4} = \underline{4}$$

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
C	07	5	17

CET II

Put + or - in the circle to make a true number sentence.

$$8 \bigcirc 3 = 11$$

$$13 \bigcirc 8 = 5$$

$$5 \bigcirc 13 = 18$$

$$15 \bigcirc 0 = 15$$

$$10 \bigcirc 6 = 4$$

$$4 \bigcirc 3 = 7$$

$$16 \bigcirc 13 = 3$$

$$3 \bigcirc 5 = 8$$

$$18 \bigcirc 11 = 7$$

$$17 \bigcirc 7 = 10$$

C I R C L E C O R R E C T B O X	TL PTS.	
	10	100%
	NO. OF PTS.	%
	9	90
	8	80
	7	70
	6	60
	5	50
	4	40
	3	30
	2	20
	1	10

Fill in the circle to make a true number sentence.

$$18 - 9 = 4 + \bigcirc$$

$$8 + 7 = \bigcirc + 6$$

$$\bigcirc - 4 = 3 + 7$$

$$14 - \bigcirc = 4 + 4$$

C I R C L E C O R R E C T B O X	TL PTS.	
	4	100%
	NO. OF PTS.	%
	3	75
	2	50
	1	25

LEVEL	UNIT	SKILL	PAGE
C	07	5	115

OBJECTIVE: Fills in + or - to complete an equation for addition and subtraction skills learned to this point.

STANDARD TEACHING SEQUENCE

Page	Supplementary Material
1. Adds using the number line.	12
2. Subtracts using the number line.	13
3. Writes + or - to complete equations.	14
4. Writes + or - to complete equations.	15
5. Writes + or - to complete equations.	
6. Writes + or - to complete equations.	16
7. Writes + or - to complete equations.	17
8. Writes + or - in addition and subtraction expressions to make them equivalent and fills in numerals.	
9. Writes + or - in addition and subtraction expressions to make them equivalent and fills in numerals.	
10. Writes + or - in addition and subtraction expressions to make them equivalent and fills in numerals.	
11. CET I.	
CET II.	18

Circle pages that are to be done.

Standard Teaching Sequence, Con't.

1967 - 68

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1965 <u>One by One</u> (Grade 1)		151
Harcourt, Brace & World, 1965 <u>Two by Two</u> (Grade 2)		101
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 3		143

Standard Teaching Sequence, Con't

1967 - 68

Sequence No. Prescription No.

19R

Makes correct number sentences by putting a plus or minus sign in the placeholder.

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1965 <u>One By One</u> (Grade 2)		153

SCHOOL CODE

NAME _____

NUMBER _____

CLASS _____



MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL C

COMBINATION OF PROCESSES (07)

SKILL 6

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; Joseph I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Write the missing numeral.

$$7 + 5 = \underline{\quad} - 3$$

In this booklet, you will learn to do these kinds of problems.

Answer

15

Find the missing numeral.

$$6 + \underline{\quad ? \quad} = 9$$

To do this problem, look at the number line.



Here you are at 6.

How many more steps do you take to get to 9? 3

Now fill in the numeral.

$$6 + \underline{\quad 3 \quad} = 9$$

$$3 + \underline{\quad 4 \quad} = 7$$



You are at 3. How many more steps are there until 7?

$$5 + \underline{\quad 3 \quad} = 8$$



$$4 + \underline{\quad 6 \quad} = 10$$



TOTAL POINTS	NUMBER CORRECT
5	

LEVEL	UNIT	SKILL	PAGE
C	07	6	1

Fill in the missing numerals. Use this number line to help you.



$$5 + \underline{7} = 12$$

$$2 + \underline{6} = 8$$

$$4 + \underline{10} = 14$$

$$7 + \underline{7} = 14$$

$$6 + \underline{9} = 15$$

$$8 + \underline{5} = 13$$

Here is a problem you have done.

$$5 + \underline{7} = 12$$

If it is turned around, can you still do it?



Here we are at 5. How many steps is it to 12?

Use the number line to find the missing numeral.

$$\underline{3} + 2 = 5$$

$$\underline{3} + 3 = 6$$

$$\underline{3} + 4 = 7$$

$$\underline{1} + 6 = 7$$

For extra practice, do Page 13.

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
C	07	6	2

Try doing these problems without using the number line.

$4 + \underline{1} = 5$

$\underline{4} + 4 = 8$

$4 + \underline{2} = 6$

$\underline{5} + 4 = 9$

$4 + \underline{3} = 7$

$\underline{6} + 4 = 10$

$6 + \underline{3} = 9$

$\underline{6} + 6 = 12$

$6 + \underline{4} = 10$

$\underline{7} + 6 = 13$

$6 + \underline{5} = 11$

$\underline{8} + 6 = 14$

$5 + \underline{5} = 10$

$\underline{8} + 5 = 13$

$5 + \underline{6} = 11$

$\underline{9} + 5 = 14$

$5 + \underline{7} = 12$

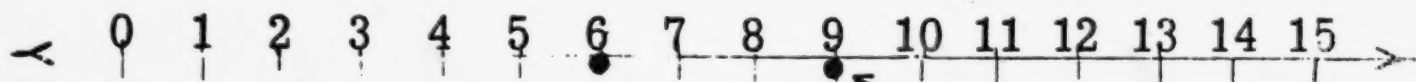
$\underline{10} + 5 = 15$

TOTAL POINTS	NUMBER CORRECT
18	

LEVEL	UNIT	SAT L	PAGE
C	07	6	3

Find the missing numerals.

$$9 - \underline{\quad ? \quad} = 6$$



Here you are at 9.

How many steps backward
do you take to get to 6? 3

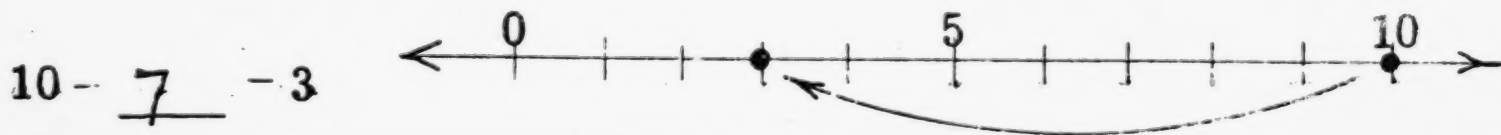
Now fill in the numeral.

$$9 - \underline{3} = 6$$

Remember that when you subtract you take backward steps on the number line.



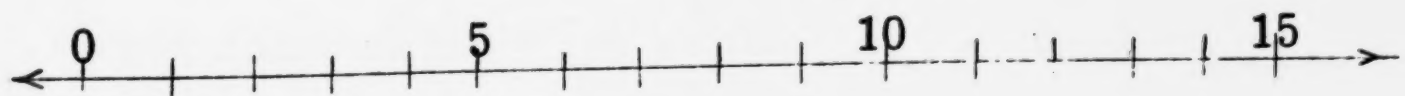
How many steps from 7 to 4?



TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
C	07	6	4

Fill in the missing numerals. Use this number line to help you.



$$10 - \underline{5} = 5$$

$$13 - \underline{7} = 6$$

$$12 - \underline{2} = 10$$

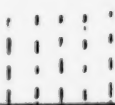
$$11 - \underline{4} = 7$$

$$15 - \underline{5} = 10$$

$$14 - \underline{5} = 9$$

Now the problem is turned around. $\underline{\quad} - 5 = 3$

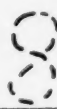
Sue took 5 of my sticks away.

Draw 5 sticks. 

I have 3 left.

Draw 3 sticks. 

How many did I have before Sue took any?

Count them all. 

Now fill in the numeral.

$$\underline{8} - 5 = 3$$

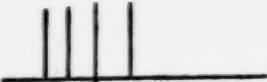
For extra practice, do Page 14.

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
C	07	6	5

Fill in the missing numerals.

$$\underline{9} - 4 = 5$$

Draw the 4 sticks which were taken away. 

Draw the 5 you have left. 

Count them all.

$$\underline{10} - 4 = 6$$

$$\underline{11} - 4 = 7$$

$$\underline{12} - 4 = 8$$

$$\underline{8} - 2 = 6$$

$$\underline{10} - 5 = 5$$

$$\underline{9} - 3 = 6$$

$$\underline{9} - 5 = 4$$

$$\underline{10} - 6 = 4$$

$$\underline{8} - 5 = 3$$

$$10 - \underline{2} = 8$$

$$9 - \underline{7} = 2$$

$$\underline{10} - 2 = 8$$

$$\underline{9} - 7 = 2$$

$$7 - \underline{3} = 4$$

$$12 - \underline{8} = 4$$

$$\underline{7} - 3 = 4$$

$$\underline{12} - 8 = 4$$

TOTAL POINTS	NUMBER CORRECT
20	

LEVEL	UNIT	SKILL	PAGE
C	07	6	6

Fill in the missing numerals.



$$15 - \underline{5} = 10$$

$$12 - \underline{4} = 8$$

$$15 - \underline{6} = 9$$

$$12 - \underline{3} = 9$$

$$15 - \underline{7} = 8$$

$$12 - \underline{2} = 10$$

$$15 - \underline{8} = 7$$

$$12 - \underline{1} = 11$$

$$\underline{8} - 4 = 4$$

$$\underline{10} - 4 = 6$$

$$\underline{7} - 4 = 3$$

$$\underline{11} - 4 = 7$$

$$\underline{6} - 4 = 2$$

$$\underline{12} - 4 = 8$$

$$\underline{5} - 4 = 1$$

$$\underline{13} - 4 = 9$$

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
C	07	6	7

Fill in the missing numerals.

$$9 + 4 = \underline{13}$$

$$9 + \underline{4} = 13$$

$$\underline{9} + 4 = 13$$

$$13 - 9 = \underline{4}$$

$$13 - \underline{9} = 4$$

$$\underline{13} - 9 = 4$$

$$5 + 11 = \underline{16}$$

$$5 + \underline{11} = 16$$

$$\underline{5} + 11 = 16$$

$$16 - 11 = \underline{5}$$

$$16 - \underline{11} = 5$$

$$\underline{16} - 11 = 5$$

$$7 + 8 = \underline{15}$$

$$7 + \underline{8} = 15$$

$$\underline{7} + 8 = 15$$

$$15 - 7 = \underline{8}$$

$$15 - \underline{7} = 8$$

$$\underline{15} - 7 = 8$$

$$10 + 8 = \underline{18}$$

$$10 + \underline{8} = 18$$

$$\underline{10} + 8 = 18$$

$$18 - 8 = \underline{10}$$

$$18 - \underline{8} = 10$$

$$\underline{18} - 8 = 10$$

TOTAL POINTS	NUMBER CORRECT
24	

LEVEL	UNIT	SKILL	PAGE
C	07	6	8

Fill in the missing numerals.

$$\begin{array}{ccc} \boxed{9 - 2} & = & \boxed{4 + ?} \\ \text{side A} & & \text{side B} \end{array}$$

This symbol means that
both sides are equal.

Side A has the value of $9 - 2 = \underline{7}$

How can you make the value of Side B equal to 7?

$$4 + \underline{3} = 7$$

Now fill in the numeral.

$$9 - 2 = 4 + \underline{3}$$

$$6 - 2 = 3 + \underline{1}$$

Subtract the value of side A and keep the answer in
your head.

Then ask $3 + ? = 4$

$$8 - 3 = 2 + \underline{3}$$

$$9 - 4 = \underline{3} + 2$$

$$5 - 1 = 3 + \underline{1}$$

$$7 - 1 = \underline{2} + 4$$

Check and see if both sides are equal.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
C	07	6	9

Fill in the missing numerals.

$$10 - ? = 8$$

$$5 + 3 = 10 - \underline{2}$$

The value of both sides equal 8.

$$2 + 5 = 10 - \underline{3}$$

$$4 + 4 = 12 - \underline{4}$$

$$8 + 2 = 12 - \underline{2}$$

$$3 + 3 = 13 - \underline{7}$$

$$4 + 9 = 15 - \underline{2}$$

$$6 + 7 = 15 - \underline{2}$$

$$4 + 2 = \underline{10} - 4$$

$$4 + 4 = \underline{10} - 2$$

$$5 + 1 = \underline{9} - 3$$

$$6 + 3 = \underline{11} - 2$$

$$\boxed{2 + 3} = \boxed{\underline{9} - 4}$$

$$3 + 5 = \underline{15} - 7$$

How can you make the value of this side equal 5?

The value of this side equals 5.

TOTAL POINTS	NUMBER CORRECT
13	

LEVEL	UNIT	SKILL	PAGE
C	07	6	10

Fill in the missing numerals.

$$\underline{2} + 5 = 14 - 7$$

$$\underline{3} + 3 = 10 - 4$$

$$6 + \underline{2} = 9 - 1$$

$$\underline{1} + 4 = 7 - 2$$

$$4 + \underline{5} = 12 - 3$$

$$\underline{2} + 6 = 11 - 3$$

$$5 + \underline{5} = 13 - 3$$

$$10 - \underline{3} = 4 + 3$$

$$\underline{11} - 5 = 1 + 5$$

$$13 - \underline{6} = 2 + 5$$

$$\underline{9} - 4 = 3 + 2$$

$$15 - \underline{10} = 2 + 3$$

$$\underline{10} - 2 = 4 + 4$$

$$11 - \underline{5} = 4 + 2$$

$$\underline{12} - 5 = 5 + 2$$

For extra practice, do Page 15.

TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
C	07	6	11

CET I

Fill in the blanks to make true number sentences.

$$7 + 3 = \underline{\quad\quad} - 7$$

$$5 + \underline{\quad\quad} = 7 - 1$$

$$\underline{\quad\quad} - 4 = 6 + 2$$

$$16 - 5 = 9 + \underline{\quad\quad}$$

$$12 - 8 = \underline{\quad\quad} + 1$$

$$3 + 7 = 14 - \underline{\quad\quad}$$

$$\underline{\quad\quad} - 2 = 7 + 9$$

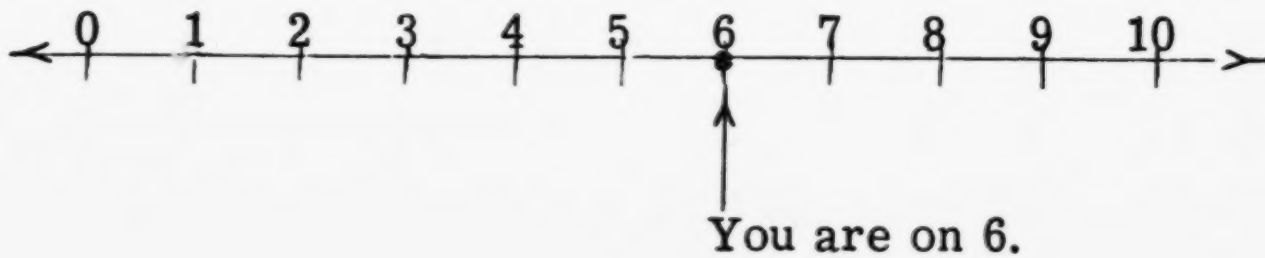
$$5 + \underline{\quad\quad} = 8 - 1$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	8	100%
	NO. OF PTS.	%
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13

LEVEL	UNIT	SKILL	PAGE
C	07	6	12

Fill in the missing numerals.

$$6 + ? = 8$$



You are on 6.

Take 2 steps to 8.

$$6 + \underline{2} = 8$$

$$? + 5 = 9$$



Here you are on 5.

Take 4 steps to 9.

$$\underline{4} + 5 = 9$$

$$2 + \underline{7} = 9$$

$$\underline{6} + 4 = 10$$

$$\underline{5} + 3 = 8$$

$$6 + \underline{1} = 7$$

$$7 + \underline{3} = 10$$

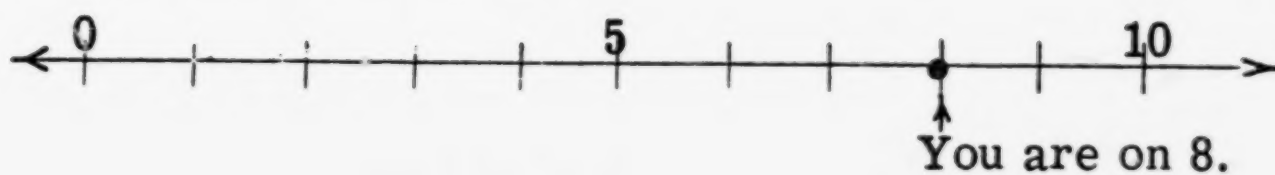
$$\underline{4} + 2 = 6$$

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
C	07	6	13

Fill in the missing numerals.

$$8 - ? = 5$$



Take 3 steps back to 5.

$$8 - \underline{3} = 5$$

$$? - 2 = 7$$

Here are the 2 which were taken
away → ||

Here are the 7 you have left → |||||
Count them.

$$\underline{9} - 2 = 7$$

$$10 - \underline{2} = 8$$

$$\underline{7} - 5 = 2$$

$$4 - \underline{1} = 3$$

$$\underline{16} - 7 = 9$$

$$11 - \underline{2} = 9$$

$$\underline{10} - 3 = 7$$

$$16 - \underline{6} = 10$$

$$\underline{9} - 6 = 3$$

TOTAL POINTS	NUMBER CORRECT
11	

LEVEL	UNIT	SKILL	PAGE
C	07	6	14

Fill in the missing numerals.

$$\underline{7} + 3 = 15 - 5$$

The value of this side equals 10.

$$? + 3 = 10$$

$$\underline{9} - 5 = 2 + 2$$

The value of this side equals 4.

$$? - 5 = 4$$

$$\underline{5} + 4 = \overset{9}{\overbrace{12 - 3}}$$

$$9 - \underline{3} = \overset{6}{\overbrace{2 + 4}}$$

$$3 + \underline{8} = 16 - 5$$

$$\underline{10} - 3 = 4 + 3$$

$$\underline{4} + 2 = 12 - 6$$

$$8 - \underline{2} = 3 + 3$$

$$1 + \underline{4} = 8 - 3$$

$$\underline{16} - 10 = 1 + 5$$

$$\underline{1} + 7 = 11 - 3$$

$$18 - \underline{8} = 5 + 5$$

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
C	07	6	15

CET II

Fill in the blanks to make true number sentences.

$$16 - 4 = \underline{\hspace{2cm}} + 9$$

$$2 + \underline{\hspace{2cm}} = 17 - 2$$

$$\underline{\hspace{2cm}} + 3 = 13 - 4$$

$$15 - 2 = 6 + \underline{\hspace{2cm}}$$

$$18 - 0 = \underline{\hspace{2cm}} + 11$$

$$12 - \underline{\hspace{2cm}} = 5 + 6$$

$$5 + 3 = 14 - \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} 8 = 2 + 6$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	8	100%
	NO. OF PTS.	%
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13

LEVEL	UNIT	SKILL	PAGE
C	07	6	16

136

OBJECTIVE: Fills in a missing addend to complete two-step equations which combine addition and subtraction expressions. Sums to 18.

STANDARD TEACHING SEQUENCE

Page	Supplementary Material
1. Uses number line to supply missing addend in one-step equations.	
2. Uses number line to supply missing addend in one-step equation.	13
3. Supplies missing addends in one-step equations; no number line.	
4. Uses number line to supply missing numeral in subtraction equations.	
5. Uses number line and counting to supply missing numeral in subtraction equations.	14
6. Supplies missing numerals in one-step subtraction equations.	
7. Supplies missing numerals in sequences of one-step subtraction equations.	
8. Supplies missing numerals in sequences of one-step addition and subtraction equations.	
9. Supplies a numeral on the addition side of a two-step equation which combines addition and subtraction.	
10. Supplies numeral on the subtraction side of a two-step equation.	
11. Supplies numerals in two-step equations.	15
12. CET I.	
CET II.	16

Circle pages that are to be done.

Standard Teaching Sequence, Con't

1967 - 68

Teaching Aids:

Instructo words, numerals, symbols

Add - a Count scale

Counting sticks, cubes

Peg boards and pegs

Abacus sets

Checkit cards (6A - 6F)

Ideal relationship cards

Help Yourself Flash Cards

This is the Posttest which has been completed by John and corrected by the Aide.

Analyze the Posttest results and make a decision about John's mastery of this unit.

Complete the record of John's work in the C-COP unit by entering the required information on the first Prescription Sheet.

SCHOOL CODE

NAME

John Tanes

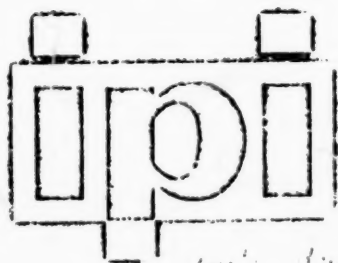
NUMBER

4444

CLASS

3

4m



MATHEMATICS

Post-Test

LEVEL C

COMBINATION OF PROCESSES (07)

Developed by The Testing and Evaluation Staff, Learning Research and Development Center, University of Pittsburgh; Richard Cox, Ph.D., Director

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

C COMBINATION OF PROCESSES (07) POST-TEST SKILL A

Directions: Add or subtract, as indicated by the sign.

$$\begin{array}{r} 68 \\ - 18 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 43 \\ + 51 \\ \hline 94 \end{array}$$

$$27 - 12 = \underline{15}$$

$$38 + 60 = \underline{98}$$

$$\begin{array}{r} 49 \\ - 10 \\ \hline 39 \end{array}$$

$$\begin{array}{r} 35 \\ + 44 \\ \hline 79 \end{array}$$

C I R C L E	TL. PTS.	
	NO. OF PTS.	%
C O R R E C T	6	100%
	5	83
	4	67
	3	50
	2	33
B O X	1	17

Directions: Add or subtract.

$$\begin{array}{r} 4 \text{ yards} \\ + 3 \text{ yards} \\ \hline 7 \text{ yards} \end{array}$$

$$\begin{array}{r} 11 \text{ cents} \\ + 5 \text{ cents} \\ \hline 16 \text{ cents} \end{array}$$

$$\begin{array}{r} 17 \text{ dozen} \\ - 4 \text{ dozen} \\ \hline 13 \text{ dozen} \end{array}$$

$$\begin{array}{r} 4 \text{ feet} \\ + 7 \text{ feet} \\ \hline 11 \text{ feet} \end{array}$$

$$12 \text{ yards} - 1 \text{ yard} = \underline{11} \text{ yards}$$

$$8 \text{ feet} - 3 \text{ feet} = \underline{5} \text{ feet}$$

$$10 \text{ inches} + 3 \text{ inches} = \underline{13} \text{ inches}$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	7	100
	NO. OF	
	PTS.	%
	6	86
	5	
	4	
	3	
	2	29
	1	14

C COMBINATION OF PROCESSES (07) POST-TEST SKILL 3

Directions: Solve each problem.

On Saturday John's father spent 3 hours mowing the lawn and 4 hours trimming the hedge. How long did John's father work in the yard Saturday? 7 hours

Dick had 15 cents to spend. He bought a toy truck for 12 cents. How much did he have left? 3 cents

Jane had a red pencil that was 6 inches long and a green pencil that was 11 inches long. How much longer was Jane's green pencil than her red pencil? 5 inches

Bill colored 2 dozen Easter eggs and his mother colored 5 dozen. How many dozen colored Easter eggs did Bill and his mother have altogether? 7 dozen

C I R C L E	TL. PTS.	
	4	100
	NO. OF PTS.	
	3	75
	2	50
C O R R E C T	1	25
B O X		

Directions: Put $>$, $<$, or $=$ in each circle to make a true number sentence.

$$3 \text{ hours} + 5 \text{ hours} \quad \bigcirc \quad = \quad 6 \text{ hours} + 2 \text{ hours}$$

$$16 \text{ inches} - 5 \text{ inches} \quad \bigcirc \quad > \quad 4 \text{ inches} + 6 \text{ inches}$$

$$9 \text{ dimes} - 4 \text{ dimes} \quad \bigcirc \quad = \quad 3 \text{ dimes} + 2 \text{ dimes}$$

$$6 \text{ yards} + 9 \text{ yards} \quad \bigcirc \quad < \quad 18 \text{ yards} - 1 \text{ yard}$$

$$8 \text{ pennies} - 5 \text{ pennies} \quad \bigcirc \quad > \quad 9 \text{ pennies} - 7 \text{ pennies}$$

C I R C L E C O R R E C T B O X	TL PTS	
	NO. OF PTS.	%
	7	100%
	6	85
	5	71
	4	57
	3	43
	2	29
	1	14

Directions: Put $=$ or $\neq$ in each circle to make a true number sentence.

$$9 \text{ inches} + 3 \text{ inches} \quad \bigcirc \quad = \quad 10 \text{ inches} + 2 \text{ inches}$$

$$6 \text{ dimes} + 2 \text{ dimes} \quad \bigcirc \quad \neq \quad 10 \text{ dimes} - 4 \text{ dimes}$$

Directions: Put + or - in each circle to make a true number sentence.

$$7 \quad \bigcirc \text{—} \quad 6 = 1$$

$$9 \quad \bigcirc \text{—} \quad 6 = 3$$

$$6 \quad \bigcirc \text{+} \quad 7 = 13$$

$$13 \quad \bigcirc \text{—} \quad 3 = 10$$

$$4 \quad \bigcirc \text{+} \quad 3 = 7$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	5	100
	NO. OF PTS.	
	PTS.	%
	4	80
	3	60
	2	40
	1	20

Directions: Fill in the blanks to make each number sentence true.

$$2 + \underline{5} = 10 - 3$$

$$6 + 1 = 12 - \underline{1} \times$$

$$2 - \underline{0} = 9 - 7$$

$$16 - \underline{12} = 3 + 1$$

$$18 - 6 = \underline{8} + 6 \times$$

C I R C L E C O R R E C T B O X	TL	PYS
	5	
	NO. OF	
	PYS	
	3	
	2	
	1	

SCHOOL STAMP	U. S. 2-3
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STUDENT NAME	
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STUDENT NUMBER	U. S.	4	5	6	
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GRADE	U. S.	9	ROOM	UNIT	U. S.	10	11	12
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UNIT DATES			
UNIT BEGAN		U. 13-16	
UNIT ENDED		U. 17-20	
DAYS WORKED*		U. 21-22	

SCHOOL CALENDAR			
BEGAN		U. 23-25	
ENDED		U. 26-28	
Worked			

SKILL BOOKLETS							CURRICULUM TEST				SC'S INIT.	DAYS* WORKED IN SKILL
DATE PRES.	PRES. INIT.	SKILL NO.	PAGE NO.	INST. TECH CODES	SCORE	MAX. POINTS	PART 1		PART 2			
S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71			SCORE	% S. 72-73	SCORE	% S. 74-75		
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW
U. & S. 79

UNIT CARD: "U" IN COLUMN 80
SKILL CARD: "S" IN COLUMN 80

KEYPUNCH SAMPLE

SKILL

PRE %

POST %

U. 29-31

U. 32-33

U. 34-35

TO 78

80

95

X01

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

147

MATHEMATICS PRESCRIPTION SHEET

PAGE: OF

SCHOOL STAMP

U. S. 2-3

STUDENT NAME

STUDENT NUMBER

U. S.

4

5

6

GRADE

U. S.

9

ROOM

UNIT

U. S.

10

11

12

UNIT DATES

UNIT BEGAN

U. 13-16

UNIT ENDED

U. 17-20

DAYS WORKED*

U. 21-22

SCHOOL CALENDAR

BEGAN

U. 23-25

ENDED

U. 26-28

Worked

// // // //

SKILL BOOKLETS							CURRICULUM TEST				SC'S INIT.	DAYS* WORKED IN SKILL
DATE PRES.	PRES. INIT.	SKILL NO.	PAGE NO.	INST. TECH CODES	SCORE	MAX. POINTS	PART 1		PART 2			
S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71	////	////	SCORE	% S. 72-73	SCORE	% S. 74-75		
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW

U. & S. 79

UNIT CARD: "U" IN COLUMN 80
SKILL CARD: "S" IN COLUMN 80

KEYPUNCH SAMPLE

SKILL

PRE %

POST %

U. 29-31

U. 32-33

U. 34-35

TO 78

80

95

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
▼			▼		▼		▼		▼
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

STUDENT
NAME

STUDENT NUMBER				
U. S.	4	5	5	5

GRADE		ROOM
U. S.	9	

UNIT			
	U. S.	10	11 12

UNIT DATES			
UNIT BEGAN		U.	13-16
UNIT ENDED		U.	17-20
DAYS WORKED*			U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		////

[illegible]

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW

[illegible]

SCHOOL STAMP

U. S. 2-3

STUDENT
NAME

STUDENT
NUMBER

U. S. 4 5 6

GRADE

U. S.

9

ROOM

UNIT

U. S.

10

11

12

UNIT DATES

UNIT BEGAN

U. 13-16

UNIT ENDED

U. 17-20

DAYS WORKED*

U. 21-22

SCHOOL CALENDAR

BEGAN

U. 23-25

ENDED

U. 26-28

Worked

U. 26-28

SKILL BOOKLETS

DATE

PRES.

SKILL

PAGE

INST.

SCORE

MAX.

CURRICULUM TEST

PART 1

PART 2

SC'S

DAYS*

PRES.

INIT.

NO.

NO.

CODES

SCORE

POINTS

SCORE

%

SCORE

%

INIT.

WORKED

S. 13-16

S. 17-19

S. 20-21

S. 22-27

S. 28-31

S. 32-35

S. 36-39

S. 40-43

S. 44-47

S. 48-51

S. 52-55

S. 56-59

S. 60-63

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW

PUNCH SAMPLE

PRE % POST %
U. 32-33 U. 34-35 TO 78
80 95

PRE AND POST TEST SCORES

ENTER SKILL
NUMBER

ENTER POINTS
PER SKILL

PRE

%

POST

%

POST

%

POST

%

▼

X

X

X

X

X

X

X

X

X

Section IV

DEVELOPING A PRESCRIPTION

CASE STUDY - TYPE 4

EILEEN O'BRIEN

E-NUMERATION

DIRECTIONS

This case study is organized in a format that draws upon your experience in writing prescriptions.

The following data is provided for you:

Placement Profile.....	Page 154
Placement - Level E.....	Page 155
Unit Test Record.....	Pages 156-7
Analysis of Student Behavior.....	Pages 158-9
Unit Pretest - E-Numeration.....	Page 161
Unit Posttest - E-Numeration.....	Page 350

You will analyze this information and use it to write the unit prescription for Eileen in E-Numeration.

Use the STS booklets for Skills 1-8 to simulate Eileen's work on the skill sheets you prescribe. (pages 169-348)

Your prescriptions should reflect the variety of instructional decisions and settings that you have been working with to this point.

It will be helpful if you keep a record of your instructional decisions as you work through this case study. The form of this record is your decision.

Your prescriptions should be recorded on the blank Prescription Sheets located at the back of this case study.

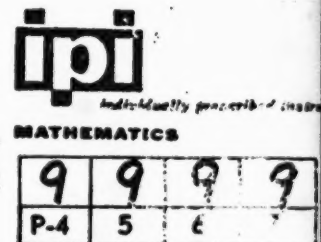
Eileen's Placement Profile is on page 154.

It indicates the units in which Eileen needed work. Study the E-Level Placement Test on page 155.

Refer to the Unit Test Record on pages 156-7. It shows Eileen's unit mastery to this point.

Use the Unit Test Record and the Placement Profile as a guide to assigning the next Pretest to Eileen.

ARITHMETIC PLACEMENT SCORE PROFILE



STUDENT NAME **Eileen O'Brien**

STUDENT NUMBER

SCHOOL STAMP

P. 2-3

GRADE

P.

3

9

ROOM

8

KEYPUNCH SAMPLE

P. 14-15	P. 16	P. 17-18	TO P. 78
MATH. AREA CODE	PLACED AT LEVEL	% OF PLACEMENT	
01	B	85	

MATHEMATICS AREA	DATE OF TEST	MATH AREA CODE	PLACEMENT LEVELS B—I								PLACE AT LEVEL
	P. 10-13		B	C	D	E	F	G	H	I	
NUMERATION	9/20	01	MAX. PTS.			10					E
			SCORE			6					
			%			60					
PLACE VALUE		02	MAX. PTS.			10	10				F
			SCORE			9	6				
			%			90	60				
ADDITION		03	MAX. PTS.			10	10	10			G
			SCORE			10	9	7			
			%			100	90	70			
SUBTRACTION		04	MAX. PTS.			10	10	10			G
			SCORE			10	10	6			
			%			100	100	60			
MULTIPLICATION		05	MAX. PTS.			10	10				F
			SCORE			8	5				
			%			80	50				
DIVISION		06	MAX. PTS.			10	10				F
			SCORE			8	6				
			%			80	60				
COMBINATION OF PROCESSES		07	MAX. PTS.			10	10				F
			SCORE			9	7				
			%			90	70				
FRACTIONS		08	MAX. PTS.		10	10					D
			SCORE		6	2					
			%		60	20					
MONEY		09	MAX. PTS.			10					E
			SCORE			4					
			%			40					
TIME		10	MAX. PTS.			10					E
			SCORE			3					
			%			30					
SYSTEMS OF MEASUREMENT		11	MAX. PTS.		10	10					D
			SCORE		5	1					
			%		50	10					
GEOMETRY		12	MAX. PTS.			10	10				F
			SCORE			9	3				
			%			90	30				
ADDITION AND SUBTRACTION		34	MAX. PTS.								
			SCORE								
			%								

IPI Placement Test

E Numeration (01)

NAME AND NUMBER Eileen O'Brien 9999

unit page 1 of 1

DATE _____

CLASS 5

C I R C L E	TL. PTS.	
	5	100%
C O R R E C T	NO. OF PTS.	
	4	80
B O X	3	60
	2	40
	1	20
	0	0

Skill 3 — Directions: Round each number below to the nearest hundred.

499 500
30,093 30,000 X
2 0

500
30,100
0

Skill 7 — Directions: Write the decimal numerals below as mixed fractions.

7.04 7 $\frac{4}{100}$
26.524 26 $\frac{524}{100}$ X

7 $\frac{4}{100}$
28 $\frac{524}{1000}$

NAME Eileen O'Brien

NUMBER 9999

MATHEMATICS UNIT TEST

RECORD

CLASS 5

[illegible]

157

APPLETON-CENTURY-CROFTS REC 1-B

UPDATE AND PLACE IN STUDENT FOLDER.

Analysis of Student Behavior

1. The behaviors which will help Eileen's learning.....

Eileen is a very good reader; she can work independently on all materials.

2. The behaviors which will hamper Eileen's learning.....

Eileen places severe demands on herself; she strives for perfection in her work and becomes very defeated by the occasional errors she makes.

3. The new behaviors which Eileen will learn in conjunction with the IPI math learnings.....

Eileen should learn to diagnose her own learning needs and analyze her errors.

Describe how your prescriptions will attempt to reflect these behaviors.....

1. _____

2. _____

3. _____

This is a copy of the Pretest completed by Eileen and corrected by the Aide.

Record (in the role of Aide) the Pretest results on the first Prescription Sheet in your packet.

Analyze the Pretest results and write the first prescription.

SCHOOL CODE

NAME

Eileen O'Brien

9a

NUMBER

9999

CLASS

5

Rm. 8



instructionally prescribed instruction

MATHEMATICS

Pre-Test

LEVEL E

NUMERATION (01)

Developed by The Testing and Evaluation Staff, Learning Research and Development Center, University of Pittsburgh; Richard Cox, Ph.D., Director

TOTAL PTS. 30/52

62%

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

Directions: Fill in the blanks in each row, counting forward by 1's.

C I R C L E C O R R E C T B O X	TL. PTS.	
	5	100%
	NO. OF PTS.	
	4	80
	3	60
	2	40
	1	20

235,198,

235,199, 235,200, 235,201

54,684,

54,684^X, 54,685^X, 54,686^X

799,997,

799,998, 799,999, 799,991^X

986,252,

986,253, 986,254, 986,255

29,999,

29,99
X, X, X

Directions: Circle all of the even numbers.

5 27 60 458 1,000 567

Directions: Put an X on the word that is the correct ending for each sentence.

The sum of two even numbers is . . .

~~even~~ odd

The product of two odd numbers is . . .

even ~~odd~~

The difference between an odd and even number is . . .

even ~~odd~~

The sum of two odd numbers is . . .

even ~~odd~~ X

C I R C L E C O R R E C T B O X	TL. PTS.	
	5	100%
	NO. OF PTS.	%
	4	80
	3	60
	2	40
	1	20

Directions: Round each of the numbers to the nearest hundred.

697 700

415 400

41,666 42,000 X

20,031 20,000

C I R C L E C O R R E C T B O X	TL. PTS.	
	8	100%
	NO. OF PTS.	
	%	
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13

Directions: Estimate the answers to the problems below by first rounding the numbers to the nearest ten and then adding or subtracting. Circle the correct estimated answer.

29 books + 12 books are how many books?

43 books 40 books 30 books 20 books X

348 plus 1,309?

1,640 1,650 1,660 1,670 X

Sarah gave away 27 of her 42 jacks. How many did she have left?

40 30 20 10

Sam lost 48 of his 103 marbles. How many marbles did Sam have left?

40 50 60 70

Directions: Write the standard numerals for the following number words.

six hundred seven

607

three thousand fourteen

3,014

one thousand nine hundred twenty-seven

1,927

nine thousand three

9,003

C I R C L E C O R R E C T B O X	TL PTS	
	NO. OF PTS.	%
	8	100%
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13

Directions: Write the following numbers in words.

576

five hundred seventy-six

6,005

six thousand five

2,711

two thousand seven hundred
eleven

9,401

nine thousand four hundred
one

Directions: Write the equivalent decimal fraction for each of these fractions.

$$\frac{5}{10} = \underline{.5}$$

$$3\frac{7}{10} = \underline{3.07} \times$$

$$48\frac{6}{100} = \underline{48.006} \times$$

$$871\frac{31}{100} = \underline{871.031} \times$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	8	100%
	NO. OF PTS.	
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13

Directions: Write the equivalent fraction for each of these decimal fractions.

$$.4 = \underline{\frac{4}{10}}$$

$$.39 = \underline{\frac{39}{1000}} \times$$

$$36.9 = \underline{36\frac{9}{100}} \times$$

$$81.07 = \underline{81\frac{7}{1000}} \times$$

Directions: Write these decimal numbers as mixed fractions.

$$4.07 \quad \underline{4 \frac{7}{1000}} \quad \times$$

$$25.642 \quad \underline{25 \frac{642}{1000}}$$

$$76.38 \quad \underline{76 \frac{38}{100}}$$

Directions: Write these decimal numbers as common fractions.

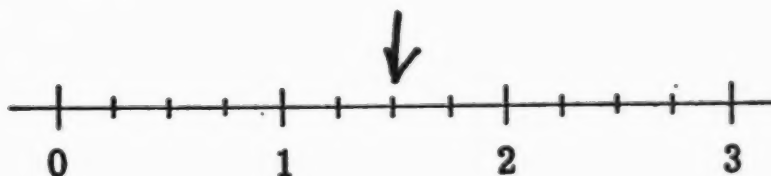
$$5.2 \quad \underline{5 \frac{2}{10}} \quad \times$$

$$9.971 \quad \underline{9 \frac{971}{10}} \quad \times$$

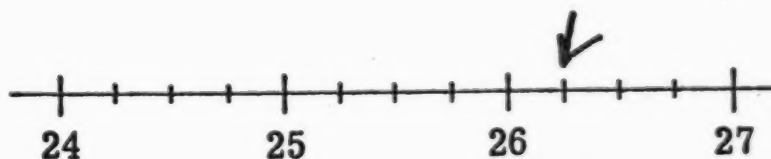
$$8.43 \quad \underline{8 \frac{43}{1000}} \quad \times$$

Directions: Draw an arrow to show the location on the number line of each decimal number.

1.5



26.25



C I R C L E C O R R E C T B O X	TL. PTS.	
	8	100%
	NO. OF	%
	PTS.	
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13

Directions: Write each row of numbers from the smallest to the largest.

4.01 4.10 0.41

smallest		largest
0.41	4.01	4.10

.75 .075 7.5

smallest		largest
.075	.75	7.5

32.6 3.26 3.06

smallest		largest
3.06	3.26	32.6

9.930 99.30 .993

smallest		largest
.993	99.30	9.930

.125 12.5 1.25

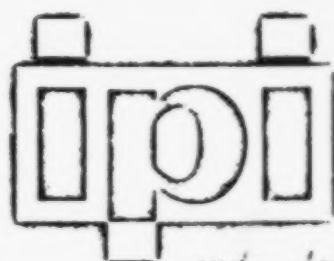
smallest		largest
1.25	.125	12.5

C I R C L E C O R R E C T B O X	TL. PTS.	
	5	100%
	NO. OF PTS.	
	4	80
	3	60
	2	40
	1	20

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____



understanding school mathematics

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL E

NUMERATION (01)

SKILL 1

Based upon materials developed by The Mathematics Curriculum Staff,
Learning Research and Development Center, University of Pittsburgh; Joseph
I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of
Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Can you count to one million?

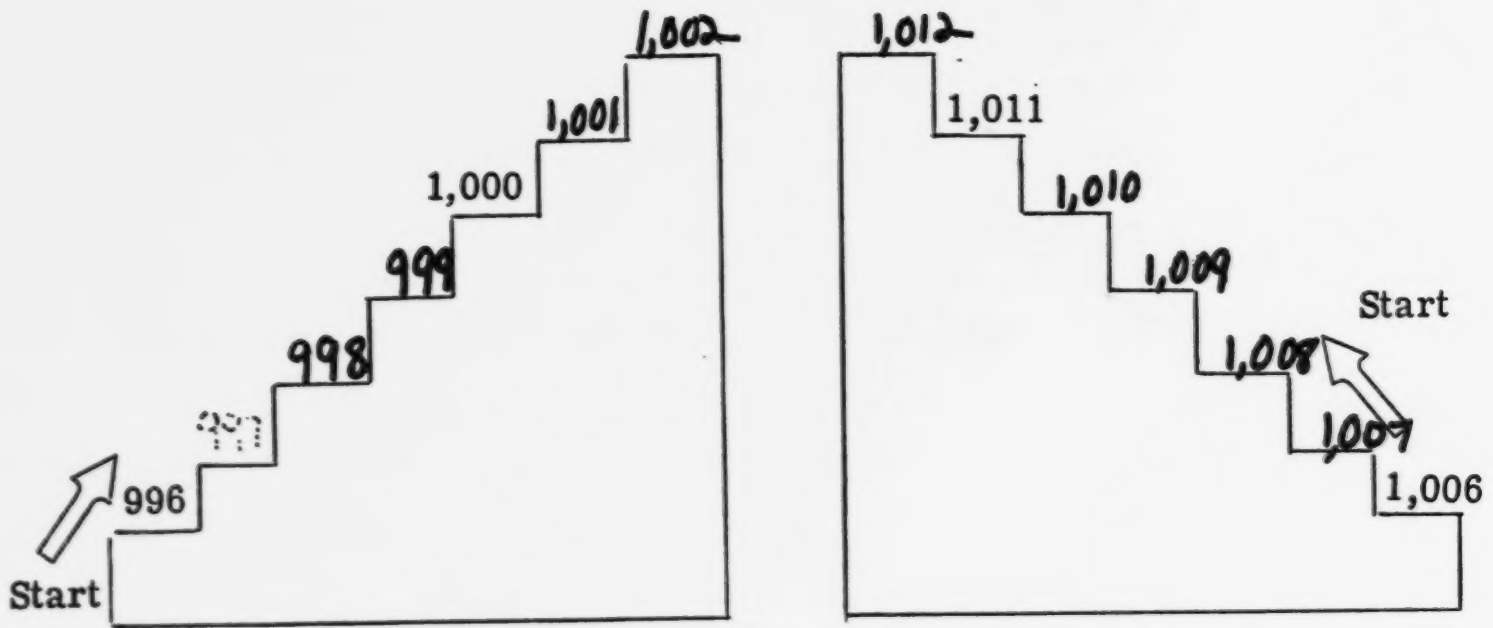
999,997, _____, _____, _____

You will learn to read and write large numbers in this booklet.

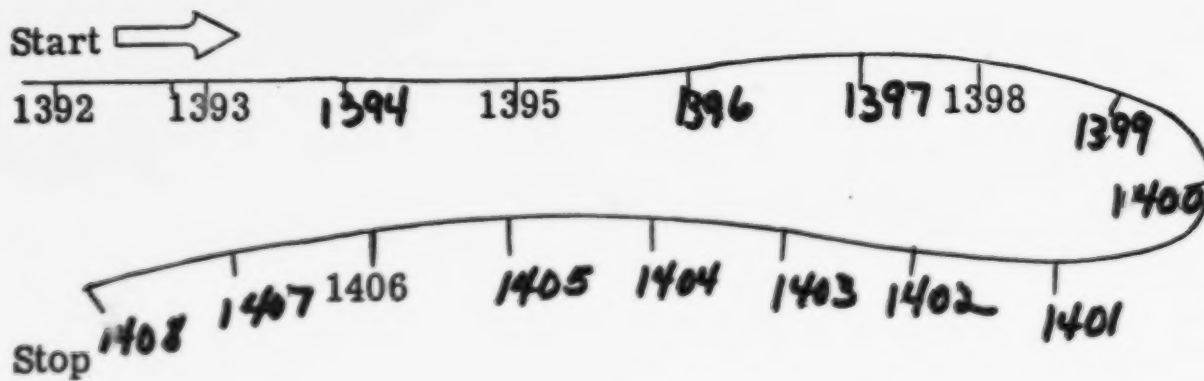
Answers

<u>999,997</u> , <u>999,998</u> , <u>999,999</u> , <u>1,000,000</u>
--

Count your way up the number steps, filling in the missing numerals.



Fill in the missing numerals.



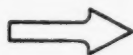
TOTAL POINTS	NUMBER CORRECT
22	

LEVEL	UNIT	SKILL	PAGE
E	01	1	1

Fill in the missing numerals.



3,998 3,999 4,000 4,001 4,002 4,003 4,004 4,005 4,006



8,147 8,148 8,149 8,150 8,151 8,152 8,153 8,154 8,155

TOTAL POINTS	NUMBER CORRECT
13	

LEVEL	UNIT	SKILL	PAGE
E	01	1	2

You have learned to write and count numerals to the thousands place.

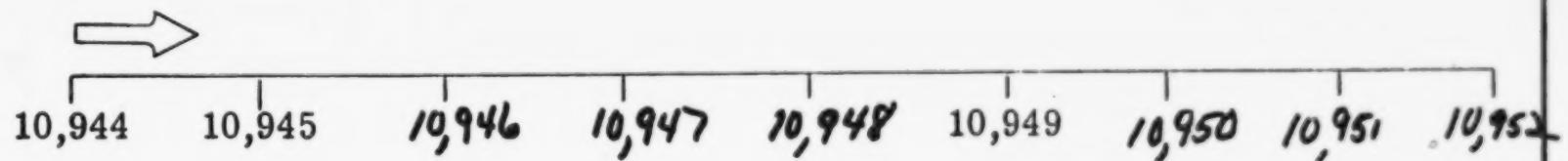
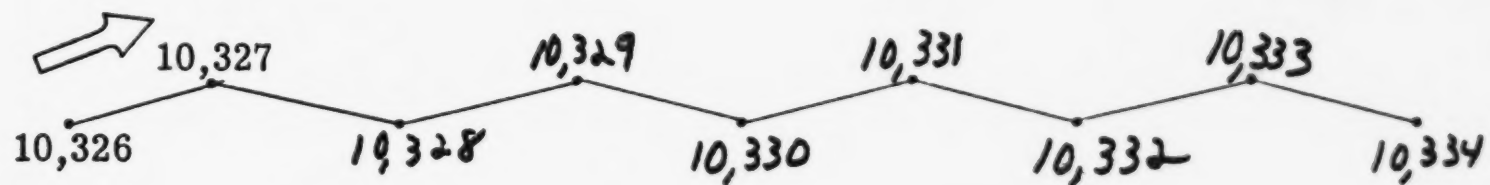
9,999 has 4 digits. It is a numeral which uses the thousands place. After

9,999 we need another place, the ten thousands place.

The first numeral that uses the ten thousands place is 10,000.

Fill in the missing numerals.

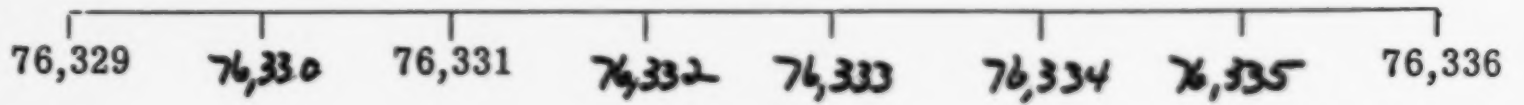
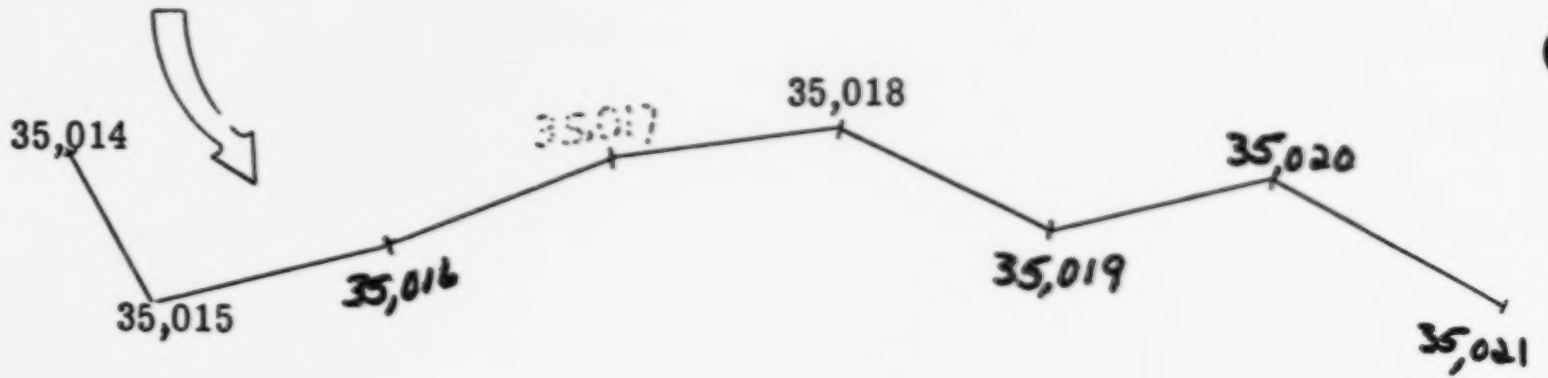
9,997, 9,998, 9,999, 10,000, 10,001, 10,002 10,003 10,004



TOTAL POINTS	NUMBER CORRECT
19	

LEVEL	UNIT	SKILL	PAGE
E	01	1	3

Fill in the missing numerals.



For extra practice, do Page 12.

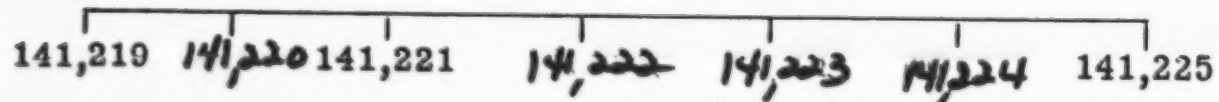
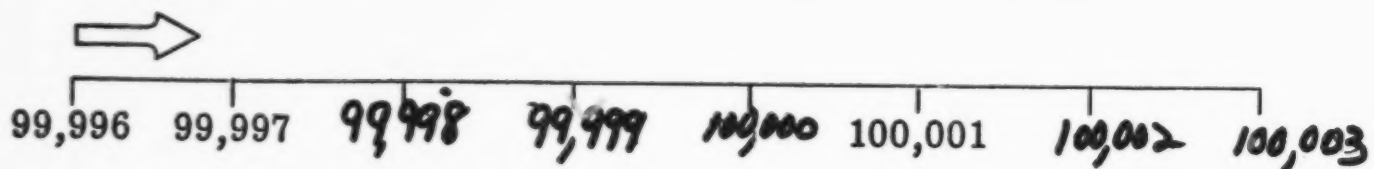
TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
E	01	1	4

You have learned to write and count the numerals to the ten thousands place.

After 99,999 we add another place, the hundred thousands place. The first numeral using the hundred thousands place is 100,000.

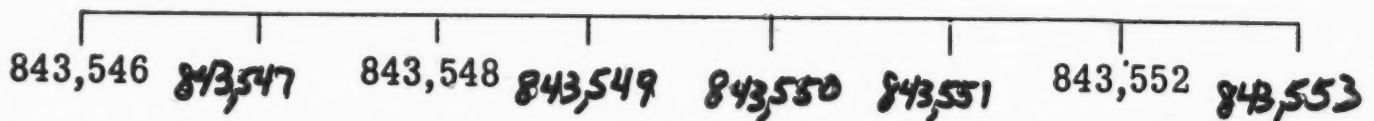
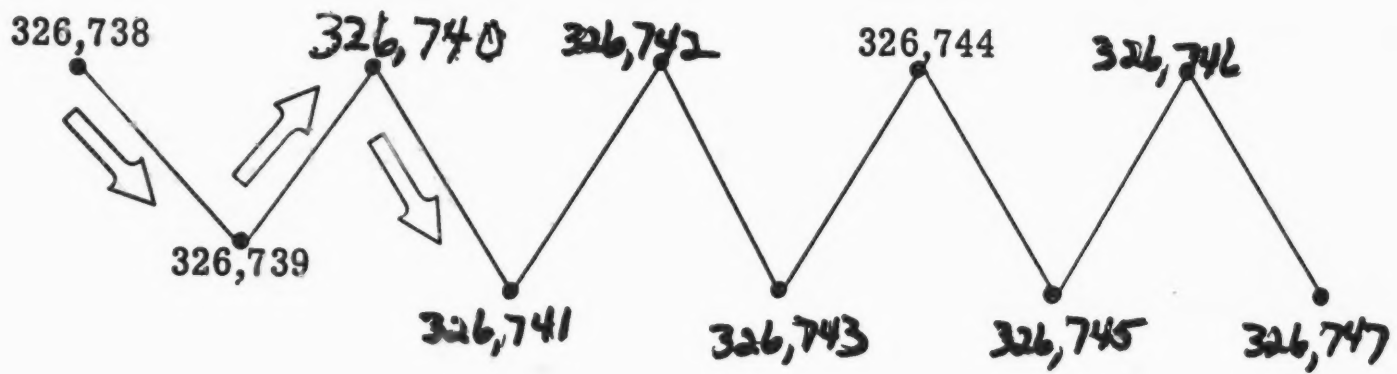
Fill in the missing numerals.



TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
E	01	1	5

Fill in the missing numerals.



For extra practice, do Page 13.

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	1	6

How many thousands are in these numerals?

1,000 1

100,000 100

10,000 10

360,402 360

87,005 87

5,612 5

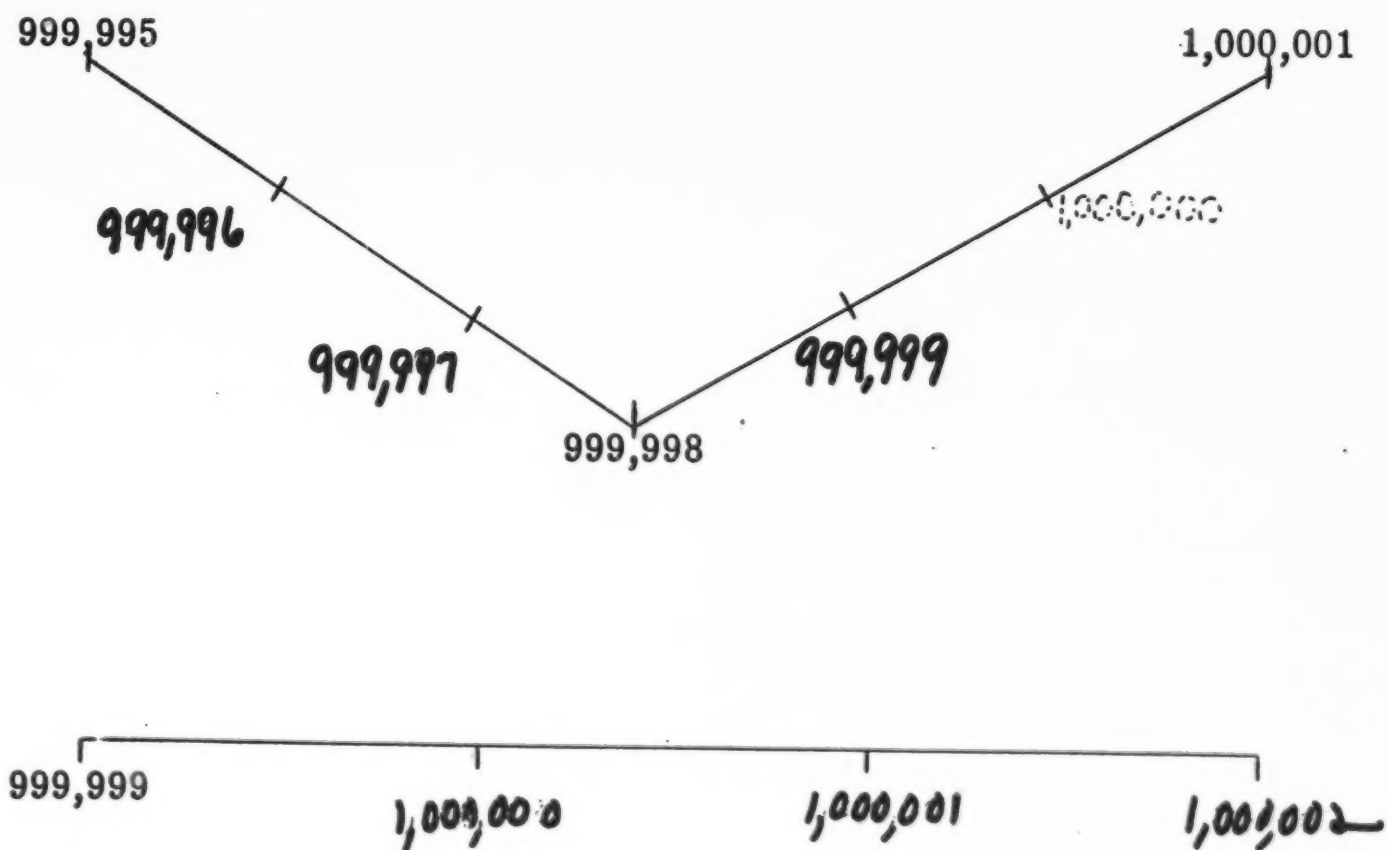
411,093 411

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
E	01	1	7

You have learned to count numerals to the hundred thousands place. After 999,999 we add another place, the millions place. The first numeral using the millions place is 1,000,000.

Fill in the missing numerals.



For extra practice, do Page 14.

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
E	01	1	8

Fill in the missing numerals.

10,008 10,009 10,010 10,012 10,013

1,000,528 1,000,529 1,000,530 1,000,531 1,000,532

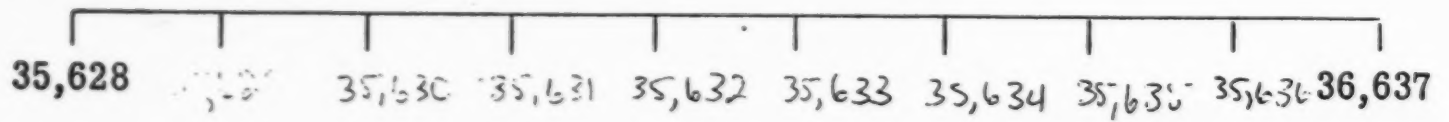
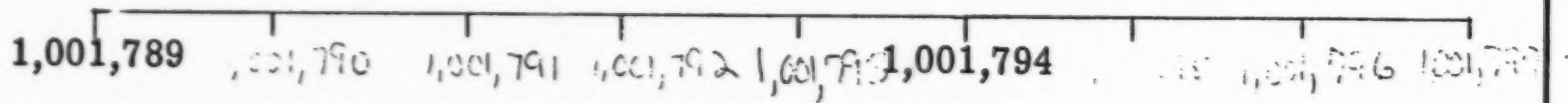
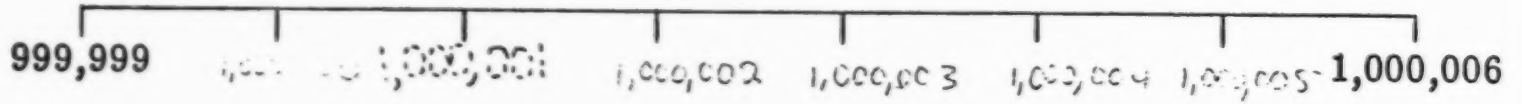
100,400 100,402 100,403 100,404 100,405

99,998 100,000 100,004

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	1	9

Fill in the missing numerals.



For extra practice, do Page 15.

TOTAL POINTS	NUMBER CORRECT
21	

LEVEL	UNIT	SKILL	PAGE
E	01	1	10

CET I

Fill in the missing numerals.

632,008, 632,009, _____, _____,

13,253, _____, _____, _____,

324,997, _____, 324,999, _____,

999,995, _____, _____, 999,998

599,999, _____, _____, _____,

6,022, _____, _____, 6,025

C I R C L E C O R R E C T B O X	TL. PTS.	
	14	100%
	NO. OF PTS.	%
	13	93
	12	86
	11	79
	10	71
	9	64
	8	57
	7	50
	6	43
	5	36
	4	29
	3	21
	2	
	1	

If the number is odd, write O on the blank. If it is even, write E.

227 _____ 66,663 _____

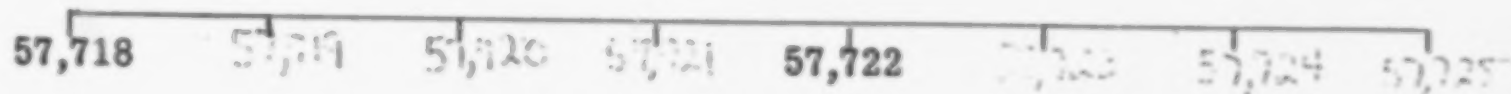
354 _____ 872,910 _____

74,992 _____ 543,241 _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

LEVEL	UNIT	SKILL	PAGE
E	01	1	11

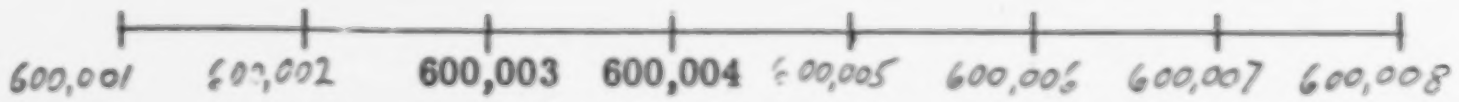
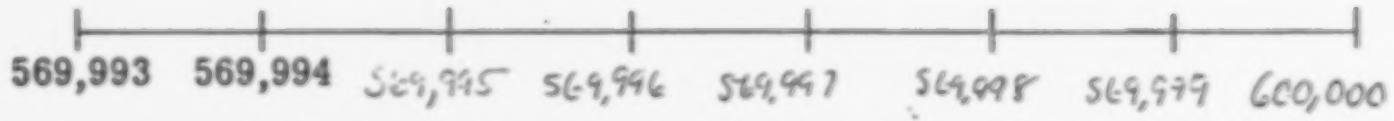
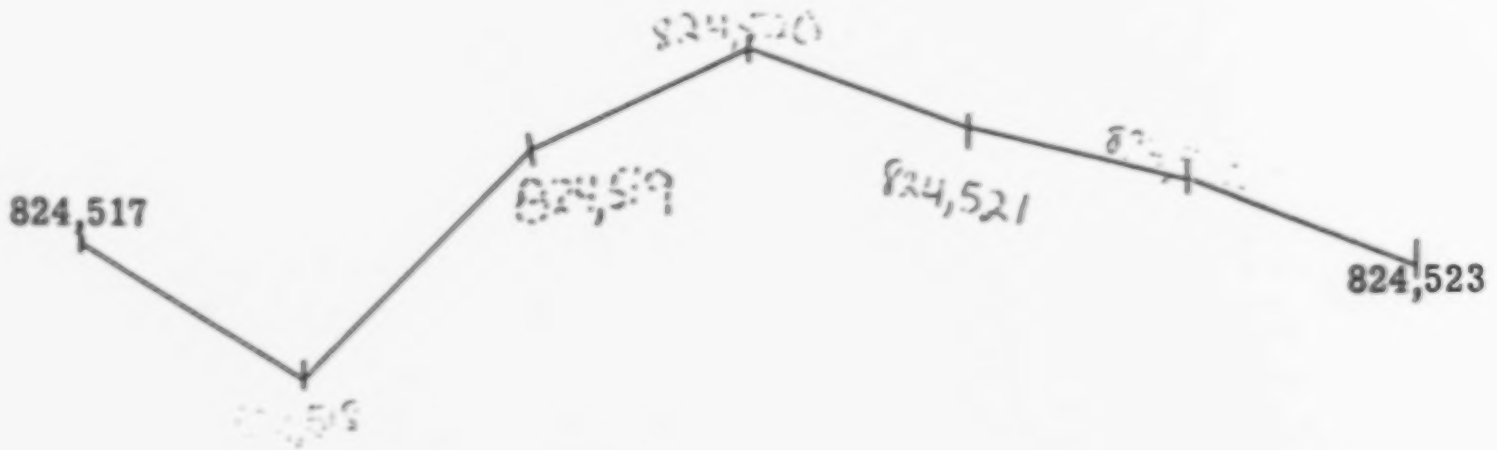
Fill in the missing numerals.



TOTAL POINTS	NUMBER CORRECT
11	

LEVEL	UNIT	SKILL	PAGE
E	62	1	12

Fill in the missing numerals.

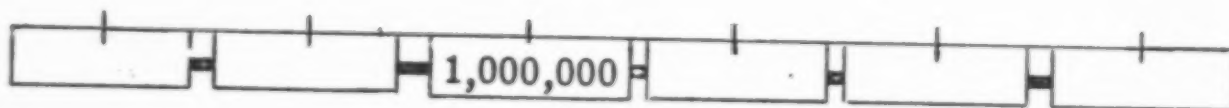
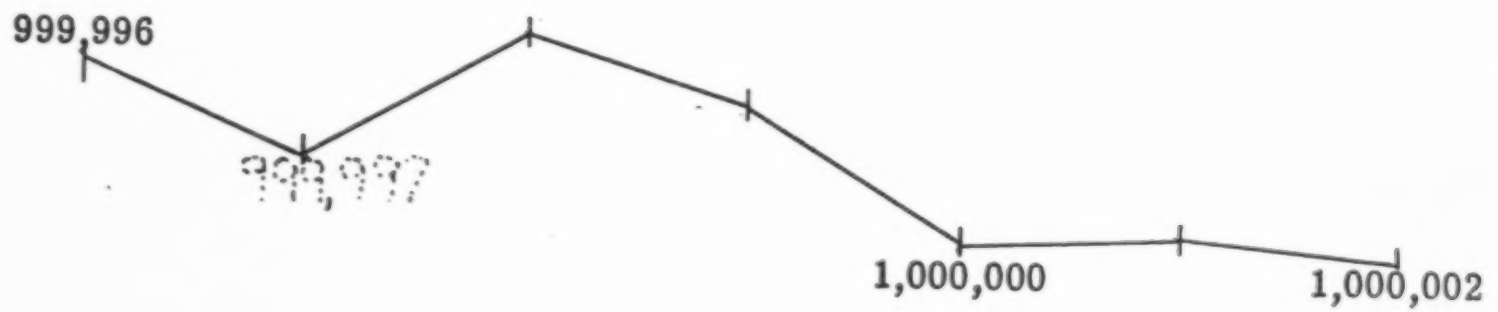


TOTAL POINTS	NUMBER CORRECT
17	

LEVEL	UNIT	SKILL	PAGE
F	01	1	13

Fill in the missing numerals.

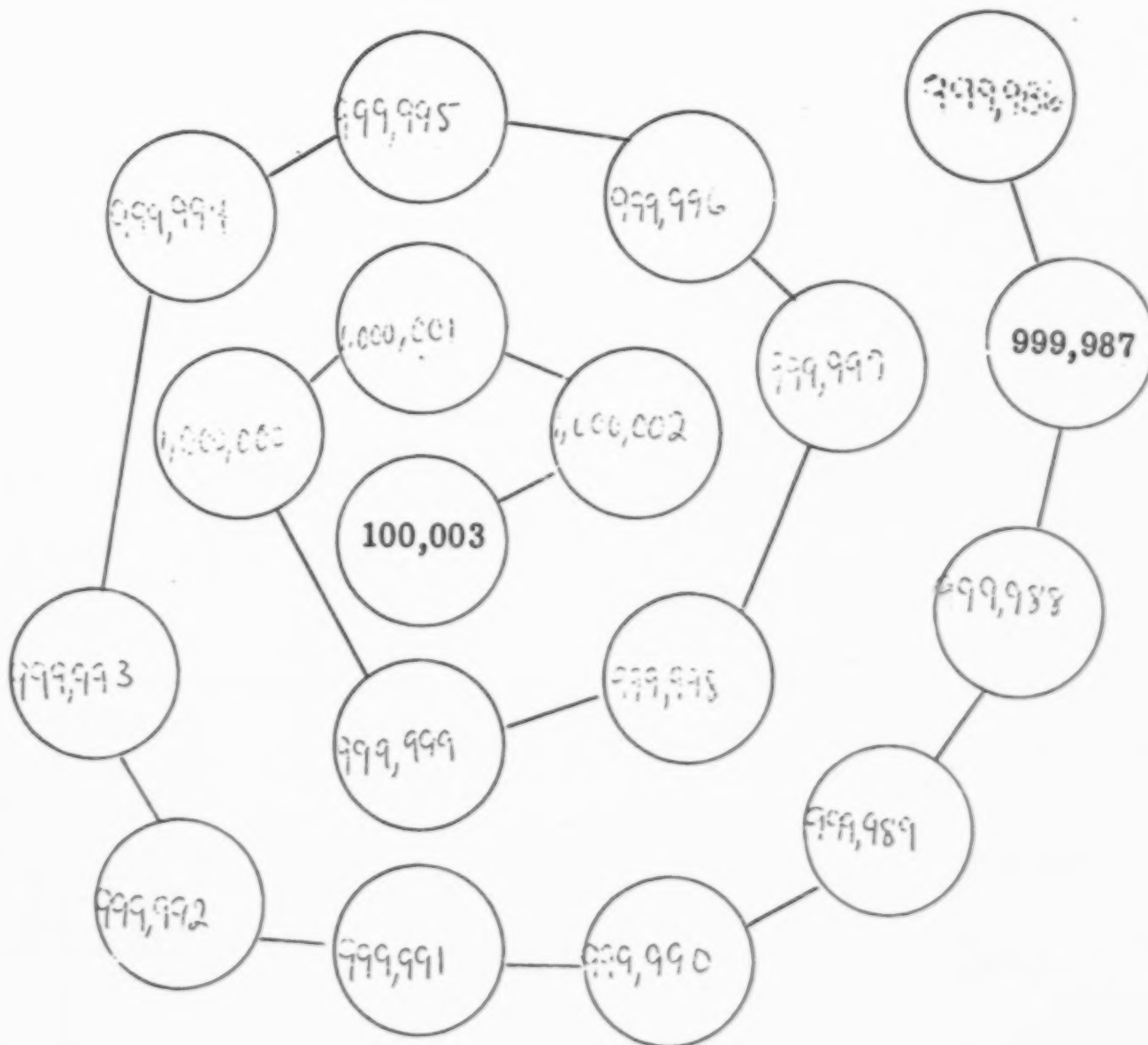
You are going from the hundred thousands place to the millions place.



TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
E	01	1	14

Fill in the missing numerals, starting here.



TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	1	15

CET II

Fill in the missing numerals.

225,299, _____, 225,301, _____

77,840, _____, _____, 77,843

109,998, 109,999, _____, _____

803,012, _____, 803,014, _____

799,997, _____, _____, _____

5,334, _____, _____, _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	14	100%
	NO. OF PTS.	%
	13	93
	12	86
	11	79
	10	71
	9	64
	8	57
	7	50
	6	43
	5	36
	4	29
	3	21
	2	14
	1	7

If the number is odd, write O in the blank. If it is even, write E.

729,226 _____ 4,703 _____

82 _____ 36,005 _____

347 _____ 420 _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

LEVEL	UNIT	SKILL	PAGE
E	01	1	16

OBJECTIVE: Counts to 1,000,000 by reading or writing short sequences of numerals from any starting point.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Counts in sequences, 996 - 1,408, filling in the missing numerals.	
2.	Fills in missing numerals in sequences, 3,998 - 8,155 .	
3.	Introduction to ten thousands place. Fills in missing numerals, 9,997 - 10,952 .	
4.	Fills in missing numerals, 35,014 - 88,514 .	12
5.	Introduction to hundred thousands place. Fills in missing numerals, 99,996 - 141,225 .	
6.	Fills in missing numerals, 326,738 - 843,553 .	13
7.	Is asked how many thousands are in various numerals, e.g., 87,005 = 87.	
8.	Introduction to millions place. Fills in missing numerals, 999,995-1,000,002	14
9.	Fills in missing numerals in various sequences.	
10.	Fills in missing numerals in various sequences.	15
11.	CET I.	
	CET II.	16

Circle pages that are to be done.

Page 18

Standard Teaching Sequence, Con't.

1967 - 68

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 4		37
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 5		15 (problems 7 - 16) 16, 27
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 6	11	

SCHOOL CODE

NAME _____

NUMBER _____

CLASS _____

*individually prescribed instruction***MATHEMATICS**

Standard Teaching Sequence Booklet

TEACHER'S EDITION**LEVEL E****NUMERATION (01)****SKILL 2**

Based upon materials developed by The Mathematics Curriculum Staff,
Learning Research and Development Center, University of Pittsburgh; Joseph
I. Lipson, Ph.D., Director; Edith Kobut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of
Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

E means an even number and O means an odd number. Put O or E in the box to complete each equation.

$$O + E = \boxed{}$$

$$E \times O = \boxed{}$$

$$E - E = \boxed{}$$

$$O - O = \boxed{}$$

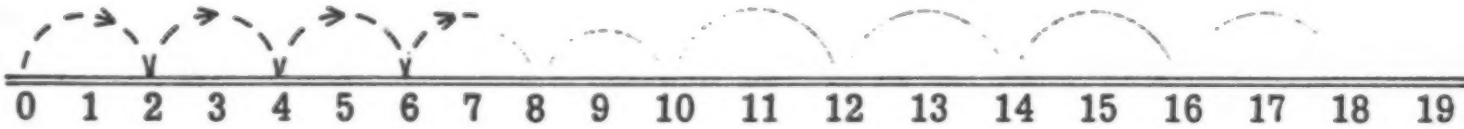
You will learn about odd and even numbers in this booklet.

Answers

$$O + E = \boxed{O} \quad E \times O = \boxed{E}$$

$$E - E = \boxed{E} \quad O - O = \boxed{E}$$

Look at this number line and complete the jumps.

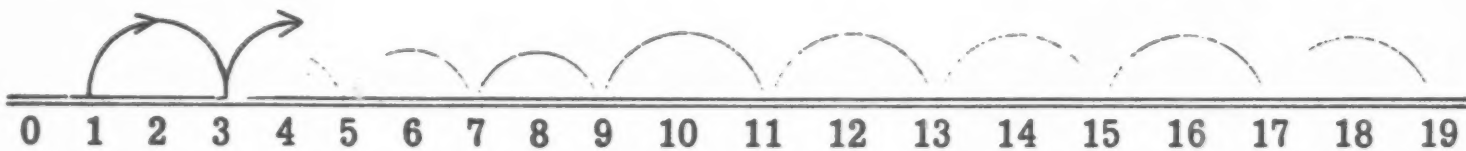


Now use the jumps that you made to complete this table.

0	2	4	6	8	10	12	14	16	18
---	---	---	---	---	----	----	----	----	----

These numbers are called Even numbers.

Now complete the jumps on this number line.



Look where you jumped to complete this table.

1	3	5	7	9	11	13	15	17	19
---	---	---	---	---	----	----	----	----	----

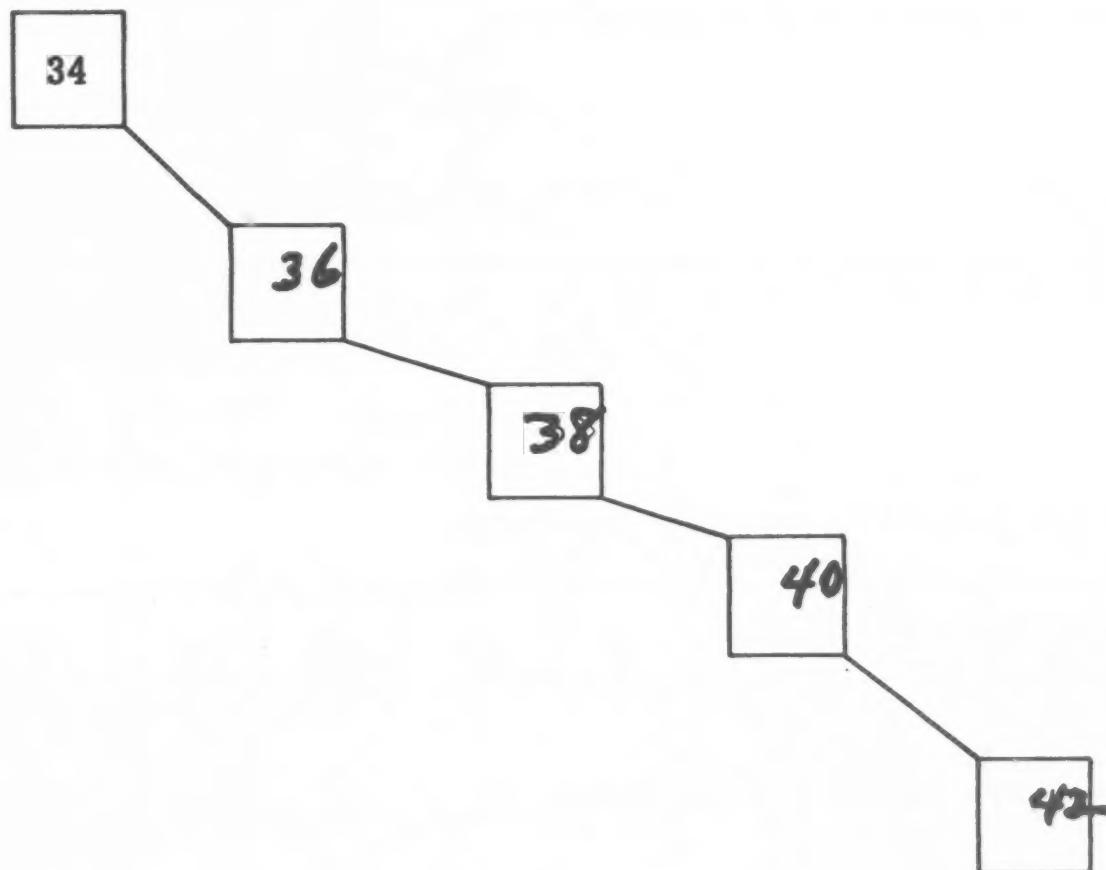
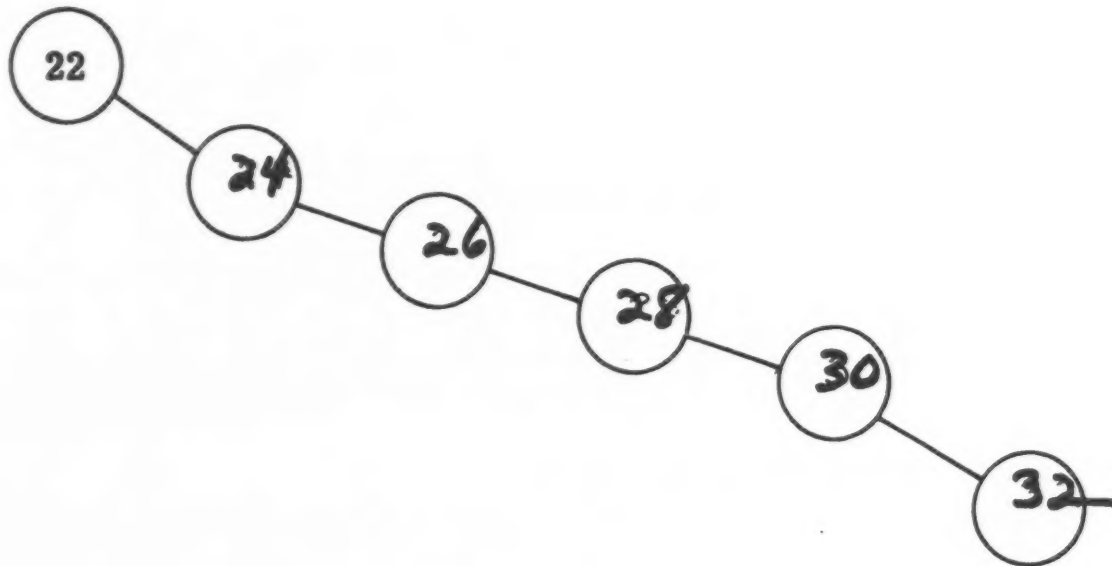
These numbers are called Odd numbers.

TOTAL POINTS	NUMBER CORRECT
20	

LEVEL	UNIT	SKILL	PAGE
E	01	2	1

Fill in the missing even numbers.

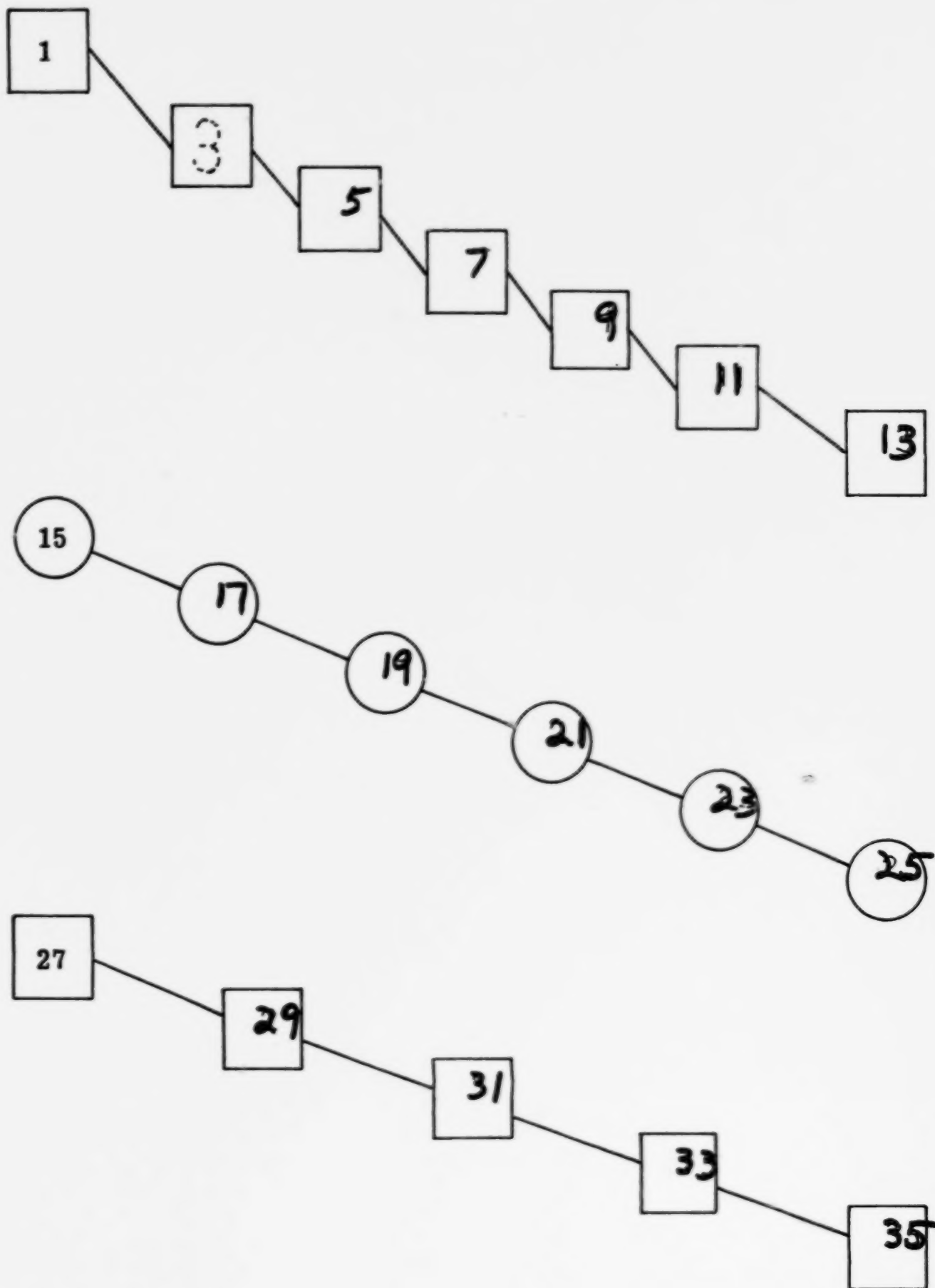
8, 10, 12, 14, 16, 18, 20.



TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	2	2

Fill in the missing odd numbers.



TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
E	01	2	3

Circle the odd numbers below.

48 32 14 23 63 19 87 98 40 3 7 85 99 17

Put a ✓ on each even number below.

35 16 ✓ 24 ✓ 43
41 100 ✓ 92 ✓ 32 ✓
19 26 ✓ 66 ✓
27 44 ✓

For extra practice, do Page 23!

TOTAL POINTS	NUMBER CORRECT
27	

200

LEVEL	UNIT	SKILL	PAGE
E	01	2	4

Fill in the missing even numbers. Each row is a new problem.

20, 22, 24, 26, 28
60, 62, 64, 66, 68
240, 242, 244, 246, 248
554, 556, 558, 560, 562

Look at the numbers you have written. What 5 numerals always appear in the ones place?

0, 2, 4, 6, 8

The rule is that even numbers always end in 0, or 2, or 4, or 6, or 8.

TOTAL POINTS	NUMBER CORRECT
25	

LEVEL	UNIT	SKILL	PAGE
E	01	2	5

Fill in the missing odd numbers.

21, 23, 25, 27, 29

81, 83, 85, 87, 89

231, 233, 235, 237, 239

455, 457, 459, 461, 463

Look at the numbers you have written. What 5 numerals always appear in the ones place?

1, 3, 5, 7, 9

The rule is that odd numbers always end in 1, or 3, or 5, or 7, or 9.

no answer

For extra practice do Page 24.

TOTAL POINTS	NUMBER CORRECT
26	

LEVEL	UNIT	SKILL	PAGE
E	01	2	6 196

Write even or odd in the blanks to describe the number.

3 is an odd number. 4 is an even number.

The sum of $3 + 4$ is an odd number.

2 is an even number. 8 is an even number.

The sum of $2 + 8$ is an even number.

9 is an odd number. 3 is an odd number.

The sum of $9 + 3$ is an even number.

6 is an even number. 1 is an odd number.

The sum of $6 + 1$ is an odd number.

7 is an odd number. 11 is an odd number.

The sum of $7 + 11$ is an even number.

20 is an even number. 8 is an even number.

The sum of $20 + 8$ is an even number.

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	2	7

If you add an odd number to an odd number, you get an even number as the sum.

Fill in the spaces.

$7 + 5 = \underline{12}$

$11 + 11 = \underline{22}$

$9 + 3 = \underline{12}$

$41 + 7 = \underline{48}$

$23 + 55 = \underline{78}$

$71 + 31 = \underline{102}$

$3 + 5 = \underline{8}$

$65 + 7 = \underline{72}$

$401 + 69 = \underline{470}$

The sum of two odd numbers is an even number.

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
E	01	2	8

If you add an even number to an even number, you get an even number as the sum.

Finish these number sentences.

$$12 + 8 = \underline{20}$$

$$40 + 10 = \underline{50}$$

$$16 + 2 = \underline{18}$$

$$2 + 4 = \underline{6}$$

$$34 + 12 = \underline{46}$$

$$22 + 88 = \underline{110}$$

$$78 + 6 = \underline{84}$$

$$94 + 2 = \underline{96}$$

The sum of two even numbers is an even number.

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
E	01	2	9

If you add an even number to an odd number, the sum is an odd number.

$$9 + 12 = \underline{21}$$

$$11 + 8 = \underline{19}$$

$$31 + 4 = \underline{35}$$

If you add an odd number to an even number, the sum is an odd number.

$$30 + 1 = \underline{31}$$

$$14 + 7 = \underline{21}$$

$$10 + 9 = \underline{19}$$

For extra practice, do Page 25.

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	2	10

Write the correct word, even or odd, in each space.

7 is an odd number. 3 is an odd number.

7 - 3 is an even number.

9 is an odd number. 4 is an even number.

9 - 4 is an odd number.

10 is an even number. 6 is an even number.

10 - 6 is an even number.

18 is an even number. 7 is an odd number.

18 - 7 is an odd number.

12 is an even number. 2 is an even number.

12 - 2 is an even number.

15 is an odd number. 5 is an odd number.

15 - 5 is an even number.

TOTAL POINTS	NUMBER CORRECT
18	

LEVEL	UNIT	SKILL	PAGE
E	01	2	11

If you subtract an odd number from an odd number, your result is an even number.

Solve these problems.

$$7 - 5 = \underline{2}$$

$$19 - 11 = \underline{8}$$

$$45 - 33 = \underline{12}$$

$$201 - 1 = \underline{200}$$

$$97 - 3 = \underline{94}$$

$$59 - 21 = \underline{38}$$

The difference between two odd numbers is an even number.

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
E	01	2	12

If you subtract an even number from an even number, the difference is an even number.

Find the differences.

$$40 - 10 = \underline{30}$$

$$12 - 8 = \underline{4}$$

$$16 - 2 = \underline{14}$$

$$88 - 44 = \underline{44}$$

$$34 - 12 = \underline{22}$$

$$78 - 6 = \underline{72}$$

The difference between two even numbers is an even number.

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
2	01	2	12

If you subtract an even number from an odd number, the difference is an odd number.

$$29 - 2 = \underline{27}$$

$$15 - 8 = \underline{7}$$

$$11 - 10 = \underline{1}$$

If you subtract an odd number from an even number, the difference is an odd number.

$$12 - 9 = \underline{3}$$

$$56 - 13 = \underline{43}$$

$$72 - 3 = \underline{69}$$

For extra practice, do Page 26.

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	2	14

Write even or odd in each space.

2 is an even number. 4 is an even number.

The product of 2×4 is an even number.

3 is an odd number. 5 is an odd number.

The product of 3×5 is an odd number.

7 is an odd number. 1 is an odd number.

The product of 7×1 is an odd number.

6 is an even number. 3 is an odd number.

The product of 6×3 is an even number.

5 is an odd number. 4 is an even number.

The product of 5×4 is an even number.

10 is an even number. 2 is an even number.

The product of 10×2 is an even number.

For extra practice, do Page 27.

TOTAL POINTS	NUMBER CORRECT
18	

LEVEL	UNIT	SKILL	PAGE
E	01	2	15

If you multiply an odd number by an odd number, your result is an odd number.

$$3 \times 7 = \underline{21}$$

$$5 \times 3 = \underline{15}$$

$$11 \times 1 = \underline{11}$$

$$3 \times 9 = \underline{27}$$

$$7 \times 5 = \underline{35}$$

$$5 \times 9 = \underline{45}$$

The product of two odd numbers is an odd number.

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
E	01	2	16

If you multiply an even number by an even number, your result is an even number.

$$4 \times 8 = \underline{32}$$

$$6 \times 2 = \underline{12}$$

$$4 \times 2 = \underline{8}$$

$$4 \times 4 = \underline{16}$$

$$4 \times 6 = \underline{24}$$

$$2 \times 2 = \underline{4}$$

The product of two even numbers is an even number.

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
E	01	2	17

If you multiply an odd number and an even number, your result is an even number.

$$3 \times 12 = \underline{36}$$

$$5 \times 2 = \underline{10}$$

$$3 \times 6 = \underline{18}$$

If you multiply an even number by an odd number, your result is an even number.

$$10 \times 5 = \underline{50}$$

$$8 \times 3 = \underline{24}$$

$$10 \times 3 = \underline{30}$$

For extra practice, do Page 28.

TO PO	NUMBER PRODUCT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	2	18

Make these statements true by writing odd or even in the spaces.

E = even number

O = odd number

E + E means the sum of 2 even numbers.

E + O means the sum of an even number and an odd number.

O + O means the sum of 2 odd numbers.

E × E means the product of 2 even numbers.

E - O means an odd number subtracted from an even number.

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	2	19

Write E or O in the spaces to complete these equations.

E means an even number.

O means an odd number.

$$E + E = \underline{E}$$

$$E + O = \underline{O}$$

$$O + O = \underline{E}$$

$$E - E = \underline{E}$$

$$E - O = \underline{O}$$

$$O - O = \underline{E}$$

$$E \times E = \underline{E}$$

$$E \times O = \underline{E}$$

$$O \times O = \underline{O}$$

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
E	01	2	20

Fill in the spaces with E or O.

E means an even number.

O means an odd number.

$$(E + E) + E = \underline{E}$$

$$(E + O) + O = \underline{E}$$

$$(E \times O) \times E = \underline{E}$$

$$(O \times O) \times E = \underline{E}$$

$$(E - O) - E = \underline{O}$$

$$E - E = \underline{E}$$

$$(O - E) - O = \underline{E}$$

$$(E \times E) \times O = \underline{E}$$

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	2	21

CET I

Write O for odd or E for even to show what the answer will be.

$$O + E = \underline{\hspace{2cm}}$$

$$O - O = \underline{\hspace{2cm}}$$

$$O + O = \underline{\hspace{2cm}}$$

$$E \times O = \underline{\hspace{2cm}}$$

Draw lines to match the examples with the rules.

$$2 \times 2 = 4$$

$$E - O = O$$

$$5 - 2 = 3$$

$$O \times O = O$$

$$6 + 2 = 8$$

$$E \times E = E$$

$$8 - 3 = 5$$

$$O - E = O$$

$$3 \times 5 = 15$$

$$E + E = E$$

Circle the best estimated answer.

There were 118 girls and 21 boys on the playground.

About how many boys and girls were on the playground?

100

120

140

Tom sold 158 tickets for the game one day, and 119 the next day. About how many tickets did he sell?

320

290

260

C I R C L E C O R R E C T B O X	TL. PTS.	
	9	100%
	NO. OF	%
	PTS.	
	8	89
	7	76
	6	67
	5	56
	4	44
	3	33
	2	22
	1	11

C I R C L E C O R R E C T B O X	TL. PTS	
	2	100%
	NO. OF	%
	PTS.	
		50

LEVEL	UNIT	SKILL	PAGE
E	01	2	22

Start at zero and count by twos.

0,	<u>2</u> ,	<u>4</u> ,	<u>6</u> ,	<u>8</u> ,
<u>10</u> ,	<u>12</u> ,	<u>14</u> ,	<u>16</u> ,	<u>18</u>

How many even numbers are in the table? 10

How many odd numbers are in the table? 0

Start at 1 and count by twos.

1,	<u>3</u> ,	<u>5</u> ,	<u>7</u> ,	<u>9</u> ,
<u>11</u> ,	<u>13</u> ,	<u>15</u> ,	<u>17</u> ,	<u>19</u>

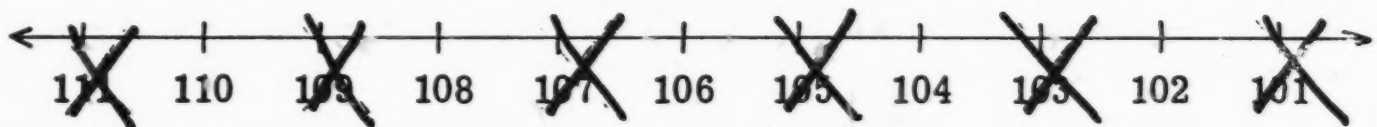
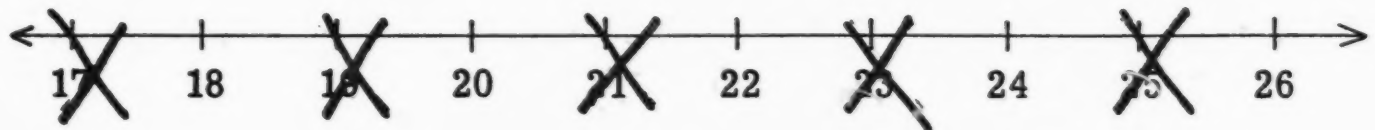
How many even numbers are in the table? 0

How many odd numbers are in the table? 10

TOTAL POINTS	NUMBER CORRECT
22	

LEVEL	UNIT	SKILL	PAGE
E	01	2	23

Put an X on the odd numbers on these number lines.



In the first line, look at each numeral you put an X on. Now look at the other numerals you put X's on.

What do you notice about odd numbers?

The answer: All odd numbers end in the digits 1, 3, 5, 7,
or 9.

TOTAL POINTS	NUMBER CORRECT
35	

LEVEL	UNIT	SKILL	PAGE
E	01	2	24

Circle odd or even to describe the numeral below.

$$\begin{array}{ccc}
 \text{Odd} & \text{Odd} & \text{Odd} \\
 \text{Even} & \text{Even} & \text{Even} \\
 \downarrow & & \downarrow \\
 3 & + & 5 = 8
 \end{array}$$

Rule An odd number plus an odd number is an even number.

$$\begin{array}{ccc}
 \text{Odd} & \text{Odd} & \text{Odd} \\
 \text{Even} & \text{Even} & \text{Even} \\
 \downarrow & & \downarrow \\
 4 & + & 6 = 10
 \end{array}$$

Rule An even number plus an even number is an even number.

$$\begin{array}{ccc}
 \text{Odd} & \text{Odd} & \text{Odd} \\
 \text{Even} & \text{Even} & \text{Even} \\
 \downarrow & & \downarrow \\
 7 & + & 2 = 9
 \end{array}$$

Rule An odd number plus an even number is an odd number.

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
E	01	2	25

Circle odd or even to describe the numeral below.

(Odd)		(Odd)		Odd
Even		Even		(Even)
↓		↓		↓
7	-	3	=	4

Rule An odd number minus an odd number is an even number.

Odd		Odd		Odd
(Even)		(Even)		(Even)
↓		↓		↓
8	-	2	=	6

Rule An even number minus an even number is an even number.

(Odd)		Odd		(Odd)
Even		(Even)		Even
↓		↓		↓
5	-	4	=	1

Rule An odd number minus an even number is an odd number.

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
E	01	2	26

Any number which is a product of 2 and another number is an even number.

Complete these equations.

$$0 = 2 \times 0$$

$$\underline{8} = 2 \times 4$$

$$2 = 2 \times \underline{1}$$

$$10 = 2 \times \underline{5}$$

$$4 = 2 \times \underline{2}$$

$$12 = 2 \times \underline{6}$$

$$\underline{6} = 2 \times 3$$

$$\underline{14} = 2 \times 7$$

The sum of any addition equation with the same two numbers as addends is an even number.

Complete these equations.

$$4 = 2 + 2$$

$$10 = 5 + \underline{5}$$

$$6 = 3 + 3$$

$$12 = \underline{6} + 6$$

$$\underline{8} = 4 + 4$$

$$\underline{14} = 7 + 7$$

TOTAL POINTS	NUMBER CORRECT
11	

LEVEL	UNIT	SKILL	PAGE
E	01	2	27

Circle the correct word, odd or even, to describe the numeral below.

(Odd)		(Odd)		(Odd)
Even		Even		Even
↓		↓		↓
5	×	3	=	15

Rule An odd number times an odd number is an odd number.

Odd		Odd		Odd
(Even)		(Even)		(Even)
↓		↓		↓
4	×	6	=	24

Rule An even number times an even number is an even number.

(Odd)		Odd		Odd
Even		(Even)		(Even)
↓		↓		↓
9	×	6	=	54

Rule An odd number times an even number is an even number.

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
E	01	2	28

CET II

Write O for odd or E for even to show what the answer will be.

$$E - E = \underline{\hspace{2cm}}$$

$$O \times O = \underline{\hspace{2cm}}$$

$$E + O = \underline{\hspace{2cm}}$$

$$O + O = \underline{\hspace{2cm}}$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	9	100%
	NO. OF PTS.	%
	8	89
	7	78
	6	67
	5	56
	4	44
	3	33
	2	22
	1	11

Draw lines to match the examples with the rules.

$$2 \times 7 = 14$$

$$O - O = E$$

$$4 \times 2 = 8$$

$$O + E = O$$

$$9 + 4 = 13$$

$$E - O = O$$

$$10 - 3 = 7$$

$$E \times O = E$$

$$5 - 3 = 2$$

$$E \times E = E$$

Circle the best estimated answer.

Dick had 178 pennies in his penny collection. Uncle Joe gave him 31 more. About how many did he have then?

210

240

190

Sally sold 31 bags of pretzels one day and 23 bags of pretzels another day. About how many bags of pretzels did she sell?

58

52

55

C I R C L E C O R R E C T B O X	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	1	50

LEVEL	UNIT	SKILL	PAGE
E	01	2	29

LEVEL E, NUMERATION, SKILL 2

OBJECTIVE: Identifies odd and even numbers and states rules for adding, subtracting, and multiplying two numbers; e.g., $E + E = E$. Selects the rule when a numerical example is given and vice versa.

STANDARD TEACHING SEQUENCE

Pages	Supplementary Material
1. Skip-counts by twos, using a number line; is introduced to even and odd numbers.	
2. Fills in numerals for even numbers in short sequences.	
3. Fills in numerals for odd numbers in short sequences.	
4. Circles numerals for odd numbers, puts X's on numerals for even numbers.	23
5. Fills in numerals for even numbers and writes endings for even numbers.	
6. Fills in numerals for odd numbers and writes endings for odd numbers.	24
7. Writes 'even' or 'odd' to describe the addends and sums in additional problems.	
8. Completes examples and rule for addition of two odd numbers.	
9. Completes examples and rule for addition of two even numbers.	
10. Completes examples and rule for addition of even and odd numbers.	25
11. Writes 'even' or 'odd' for addends and sums for subtraction problems.	
12. Completes examples and rule for subtraction of two odd numbers.	
13. Completes examples and rule for subtraction of two even numbers.	
14. Completes examples and rule for subtraction of even and odd numbers.	26
15. Writes 'even' or 'odd' for factors and products in multiplication problems.	27
16. Completes examples and rule for multiplication of two odd numbers.	
17. Completes examples and rule for multiplication of two even numbers.	
18. Completes examples and rule for multiplication of even and odd numbers.	28
19. Completes statements using E and O by writing even or odd: adding, subtracting, and multiplying.	
20. Completes statements using E and O by supplying these symbols for even and odd.	
21. Completes statements using E and O by supplying these symbols for even and odd.	
22. CET I. CET II.	29

Circle pages that are to be done.

Standard Teaching Sequence, Con't.

1967-68

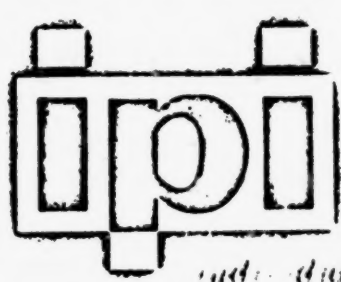
Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 5		12

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____



mathematically prescribed instruction

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL E

NUMERATION (01)

SKILL 3

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; Joseph I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Write in the missing numerals.

107,998, _____, _____, _____,
_____, _____, _____, 108,005.

When a word problem must be solved very rapidly, estimate, or approximate, the answer, by rounding the numbers to the nearest ten or hundred. Here is an example.

Stephen sold 289 tickets for the picnic one day, and 156 tickets the next day. About how many tickets did he sell?

(Estimate to tens.)

This booklet will show you how to solve problems by estimating.

Answers

107,999, 108,000, 108,001,
108,002, 108,003, 108,004
450 tickets

These are multiples of 10.

6×10

3×10

$4 \times 10 = 40$

7×10

Circle the multiples of ten which appear below.

3×9

10×6

4×10

$8 \times 10 = 80$

9×8

7×6

8×10

12×10

70

$3 \times 10 = 30$

50

5×8

10×6

20

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	3	1

A multiple of ten is the product of two numerals, such that one numeral is 10.

Circle the multiples of ten below.

60

8×10

32

70

6×8

9×10

10×1

81

50

5×9

10×7

3×10

11×6

30

8×2

21

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	3	2

12 is between 10 and ____ (what other multiple of 10?)

12 is nearer to ____ (10 or 20?)

A number is rounded to the nearest ten by finding the multiple of ten nearest to that number.

Write the multiple of ten nearest to the given numeral.

12 10

41 40

23 20

13 10

39 40

22 20

18 20

34 30

26 30

17 20

Remember that if a numeral ends in five, it should always be rounded to the greater multiple of ten.

Round each of the following to the nearest ten.

45 50

5 10

75 80

85 90

15 20

95 100

For extra practice, do Page 14.

TOTAL POINTS	NUMBER CORRECT
18	

LEVEL	UNIT	SKILL	PAGE
E	01	3	3

Round each of the following to the nearest ten.

77 80

25 30

25 30

3 0

49 50

101 100

188 190

1,165 1170

155 160

7 10

10,572 10,570

99 100

16 20

13,395 13,400

For extra practice, do Page 15.

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	3	4

These are multiples of 100.

$$3 \times 100 = 300$$

$$42 \times 100$$

$$600$$

$$100 \times 73$$

$$38 \times 100$$

$$500$$

Circle the multiples of 100 below.

$$6 \times 100$$

$$100$$

$$75 \times 200$$

$$700$$

$$43 \times 100$$

$$100 \times 8$$

$$8 \times 10$$

$$250$$

$$92 \times 320$$

$$161 \times 100$$

$$1,000 \times 10$$

$$4 \times 100$$

$$300$$

$$350 \times 1$$

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	3	5

A multiple of 100 is the product of two numerals such that one numeral is 100.

Circle the multiples of 100 below.

$$(100 \times 2)$$

$$33 \times 99$$

$$(300)$$

$$(6 \times 100)$$

$$(110 \times 100)$$

$$10 \times 3$$

$$(52 \times 100)$$

$$(600)$$

$$(100 \times 11)$$

$$17 \times 101$$

$$850$$

$$(1800)$$

$$(100 \times 785)$$

$$101 \times 162$$

$$420$$

$$(8 \times 100)$$

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	3	6

Round off to nearest 100.

145 is between 100 and ____ (what multiple of 100?)

145 is nearer to ____ (100 or 200?)

Write the multiple of 100 nearest to the given numeral.

75 100

238 200

109 100

380 400

43 0

257 300

222 200

155 200

315 300

280 300

760 800

804 800

You round to the nearest 100 when you find the multiple of 100 nearest to a certain whole number.

Remember that if a numeral ends in fifty, you should always round to the greater multiple of one hundred.

Round each of the following to the nearest multiple of 100.

150 200

350 400

650 700

750 800

250 300

950 1000

For more practice do Page 16.

TOTAL POINTS	NUMBER CORRECT
19	

LEVEL	UNIT	SKILL	PAGE
E	01	3	7

Practice rounding each of the following to the nearest 100.

85 100

999 1000

157 200

17,182 17,200

233 200

49 0

77,717 77,700

873 900

723 700

1,256 1,300

1,389 1,400

126 100

350 400

9,950 10,000

15,006 15,000

666 700

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	3	8

Round each of the following numerals, first to the nearest ten and then to the nearest hundred. Sometimes you will round to the nearest hundred or ten to help estimate or approximate an answer.

	Nearest ten	Nearest hundred
475	<u>480</u>	<u>500</u>
1,007	<u> </u>	<u> </u>
999	<u> </u>	<u> </u>
67	<u> </u>	<u> </u>
63,465	<u>63,470</u>	<u> </u>
7,650	<u> </u>	<u> </u>
82,631	<u> </u>	<u> </u>
6,542	<u> </u>	<u> </u>
15,791	<u> </u>	<u> </u>
1,257	<u> </u>	<u> </u>
99,825	<u> </u>	<u> </u>
712	<u> </u>	<u> </u>

TOTAL POINTS	NUMBER CORRECT
24	

LEVEL	UNIT	SKILL	PAGE
E	01	3	9

Sometimes when you work a problem you try to find a numeral which is close to the answer. When you do this, you have found an estimate.

Find the estimate of the following problems. First round each numeral to the nearest ten. Then add or subtract. Finally, find the exact answer.

Estimate	Exact
$72 + 86 = \underline{70} + \underline{90} = \underline{160}$	$\underline{158}$
$147 - 22 = \underline{150} - \underline{20} = \underline{130}$	$\underline{125}$
$395 - 254 = \underline{400} - \underline{250} = \underline{150}$	$\underline{141}$
$38 + 83 = \underline{40} + \underline{80} = \underline{120}$	$\underline{121}$
$629 + 43 = \underline{630} + \underline{40} = \underline{670}$	$\underline{672}$
$97 - 19 = \underline{100} - \underline{20} = \underline{80}$	$\underline{78}$
$766 - 473 = \underline{770} - \underline{470} = \underline{300}$	$\underline{293}$
$925 + 4 = \underline{930} + \underline{0} = \underline{930}$	$\underline{929}$
$99 - 16 = \underline{100} - \underline{20} = \underline{80}$	$\underline{83}$

For extra practice, do Page 17.

TOTAL POINTS	NUMBER CORRECT
32	

LEVEL	UNIT	SKILL	PAGE
E	01	3	10

See if you can use estimates to solve some word problems.

For each problem, estimate the answer by rounding to the nearest ten.

Then find the exact answer.

Tom sold 76 newspapers on Monday and 53 on Tuesday. How many newspapers did he sell on the two days?

Exact

Estimate

129

$(80 + 50 = 130)$ 130

Harry had 44 cars. Billy had 55. How many cars did they have together?

Exact

Estimate

99

$(40 + 60) =$ 100

Joe had 63 bugs in his collection. Frank had 86 in his. How many more bugs did Frank have?

Exact

Estimate

23

$(90 - 60) =$ 30

(Did you remember to subtract?)

Sally had 34 dolls. Sue had 19. How many more dolls did Sally have?

Exact

Estimate

15

$(30 - 20) =$ 10

For extra practice, go Page 18.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	3	11

Here are some more word problems. Solve them. First estimate the answer by rounding to the nearest hundred. Then find the exact answer.

Jim had 239 bees in his collection. John had 252 bees in his collection. Together, how many bees did the two boys have?

Estimate

500

Exact

491

There are 24,563 people living in New Kensington. There are 26,833 people living in Greensburg. How many more people are living in Greensburg than in New Kensington? (Do you add or subtract?)

Estimate

22,000

Exact

22,270

Mr. Smith bought a color television for \$657. Mrs. Smith bought a clothes dryer for \$328. How much money did Mr. and Mrs. Smith spend on the television and the dryer?

Estimate

\$1,000

Exact

\$985

For more practice, do Page 19.

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	3	12

CET I

Write the correct answer in each blank.

Is 40 nearer to 38 or 45? _____

Is 71 nearer to 70 or 75? _____

Is 7 nearer to 10 or 0? _____

Is 833 nearer to 830 or 840? _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

Circle the best estimated answer.

Sue sold 319 bags of potato chips one day and 208 bags the next day. About how many more bags of potato chips were sold on the first day than on the next day?

500

85

110

Tom sold 127 tickets for the picnic in one day and 178 the next day. About how many tickets did he sell?

50

240

310

Write the numerals for these number words.

Eight hundred sixteen _____

Nineteen thousand sixty-three _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	1	50

LEVEL	UNIT	SKILL	PAGE
E	01	3	13

Answer the following questions.

13 is nearer to 10 (10 or 20?)

36 is nearer to 40 (30 or 40?)

28 is nearer to 30 (20 or 30?)

16 is nearer to 20 (10 or 20?)

43 is nearer to 40 (40 or 50?)

2 is nearer to 0 (0 or 10?)

22 is nearer to 20 (20 or 30?)

17 is nearer to 20 (10 or 20?)

8 is nearer to 10 (0 or 10?)

39 is nearer to 40 (30 or 40?)

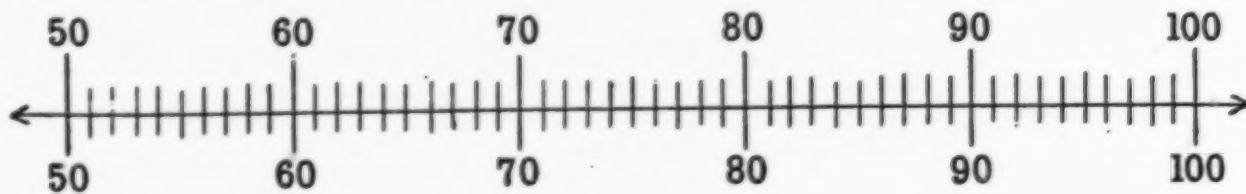
23 is nearer to 20 (20 or 30?)

4 is nearer to 0 (0 or 10?)

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	3	14

Answer the following questions. Use the number line for help.



64 is about 60 (60 or 70?)

38 is about 40 (30 or 40?)

74 is about 70 (70 or 80?)

59 is about 60 (50 or 60?)

97 is about 100 (90 or 100?)

65 is about 70 (60 or 70?)

82 is about 80 (80 or 90?)

Write the multiple of ten nearest to the following numerals.

87 90

73 70

95 100

66 70

82 80

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	3	15

Round each of the following numerals to the nearest ten.

29 30

144 140

31 30

7,885 7890

333 330

25,756 25,760

1,285 1290

Round each of the following numerals to the nearest hundred.

750 800

895 900

1,026 1,000

57,962 58,000

19 0

68 100

82,550 82,600

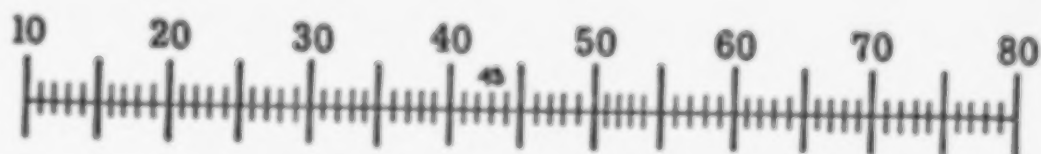
TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	3	16

Round each addend to the nearest multiple of ten. Estimate the sum by adding the multiples of ten. Then find the exact sum.

	Estimate	Exact
$12 + 19$	<u>30</u>	<u>31</u>
$62 + 31$	<u>90</u>	<u>93</u>
$57 + 42$	<u>100</u>	<u>99</u>
$77 + 52$	<u>130</u>	<u>129</u>
$35 + 24$	<u>60</u>	<u>59</u>
$45 + 15$	<u>70</u>	<u>60</u>

You can mark the numerals on the number line below if you need help finding the nearest multiple of ten.



TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
E	01	3	17

Solve the following word problems. First estimate the answer by rounding to the nearest ten. Then find the exact answer.

Jane collected 55 seashells and Jill collected 101. How many seashells did they collect together?

Estimate

160

Exact

156

A gray truck carried 377 pounds of dirt. A red truck carried 263 pounds. How many pounds did they carry together?

Estimate

640

Exact

640

Ann saw 85 clowns. Nancy saw 52. How many more clowns did Ann see?

Estimate

40

Exact

33

Mary made 93 cookies. Alice made 112. How many more cookies did Alice make?

Estimate

20

Exact

19

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	3	18

Solve the following word problems. First estimate the answer by rounding to the nearest hundred. Then find the exact answer.

On Monday 19,767 people attended the baseball game. On Tuesday 21,329 people attended. How many people attended on the two days?

Estimate

41,000

Exact

41,096

Mr. Jones used 972 stones to build his wall. Mr. Smith used 644 to build his. How many more stones did Mr. Jones use?

Estimate

400

Exact

328

Farmer Brown had 550 head of cattle. Farmer Johnson had 1,395 head of cattle. How many more head of cattle did Farmer Johnson have?

Estimate

800

Exact

845

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	3	19

CET II

Round each number to the nearest ten.

32 _____ 68 _____

Round each number to the nearest hundred.

793 _____ 441 _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

Circle the best estimated answer.

Terry has 432 stamps in his stamp collection. He will buy 158 more. How many will he have then?

300 500 600

Mr. Benson sold 529 hot dogs on Tuesday at the game. On Wednesday he sold 750. How many more did he sell on Wednesday?

500 220 110

Write the numerals for these number words.

Seven hundred twenty-six _____

One thousand nine hundred sixty-eight _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	1	50

LEVEL	UNIT	SKILL	PAGE
E	01	3	20

OBJECTIVE: Rounds numbers to tens and hundreds for comparison and for estimating answers in simple word problems.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Selects multiples of ten.	
2.	Selects multiples of ten.	
3.	Rounds numerals to nearest ten. Numerals under 100, including numerals ending in 5.	14
4.	Rounds numerals to nearest ten. Numerals under 20,000, some ending in 5.	15
5.	Selects multiples of 100, working from examples.	
6.	Selects multiples of 100, working from definition.	
7.	Rounds numerals to nearest 100. Numerals to 1,000, some ending in 50.	16
8.	Rounds numerals to nearest 100. Numerals under 20,000, some ending in 50.	
9.	Rounds numerals to nearest ten and then to nearest 100 under 100,000.	
10.	Rounds numerals to nearest ten to estimate result of addition or subtraction then finds exact answer.	17
11.	Estimates answers to word problems by rounding numbers to nearest ten before adding or subtracting. Then finds exact answer.	18
12.	Estimates answers to word problems by rounding numbers to nearest 100 before adding or subtracting. Then finds exact answer.	19
13.	CET I.	
	CET II.	20

Circle pages that are to be done.

Standard Teaching Sequence, Con't.

1967-68

Sequence No. Prescription No.

21R

Rounds a list of given numbers to the nearest multiple of ten. Uses a number line to 30 to help find answers.

22k

Estimates answers to problems by first rounding given numbers to the nearest multiple of ten, then adding the rounded numbers to find the total. Story situation presented.

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 3	152	126
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 4	36	254
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 5		14, 15 (prob 1-6)

SCHOOL CODE

NAME _____

NUMBER _____

CLASS _____



MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL E

NUMERATION (01)

SKILL 4

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; Joseph I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

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Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Write the numerals for these number words.

Fourteen _____

Seven thousand one hundred twenty-eight _____

Write the number words for these numerals.

807 _____

9,047 _____

4,500 _____

68 _____

Answers

14

7,128

eight hundred seven

nine thousand forty-seven

four thousand five hundred

sixty-eight

Write the missing numerals or number words.

<u>0</u>	zero	17	<u>seventeen</u>
1	one	<u>18</u>	eighteen
2	<u>two</u>	19	<u>nineteen</u>
3	<u>three</u>	<u>20</u>	twenty
4	<u>four</u>	21	<u>twenty-one</u>
5	<u>five</u>	<u>22</u>	twenty-two
6	<u>six</u>	23	<u>twenty-three</u>
7	<u>seven</u>	24	<u>twenty-four</u>
8	<u>eight</u>	<u>25</u>	twenty-five
9	<u>nine</u>	26	<u>twenty-six</u>
10	<u>ten</u>	<u>27</u>	twenty-seven
<u>11</u>	eleven	<u>28</u>	<u>twenty-eight</u>
<u>12</u>	twelve	29	<u>twenty-nine</u>
<u>13</u>	thirteen	<u>30</u>	thirty
14	<u>fourteen</u>	<u>31</u>	<u>thirty-one</u>
<u>15</u>	fifteen	<u>32</u>	thirty- <u>two</u>
16	<u>sixteen</u>	33	<u>thirty-three</u>

TOTAL POINTS	NUMBER CORRECT
37	

LEVEL	UNIT	SKILL	PAGE
E	21	4	1

Write the missing numerals or number words.

38	thirty- <u>eight</u>	57	_____
39	_____	58	fifty- _____
40	forty	59	_____
41	<u> </u> -one	<u> </u>	sixty
42	_____	61	<u> </u> -one
<u>43</u>	forty-three	62	sixty- _____
44	_____	63	_____
<u>45</u>	forty-five	<u> </u>	sixty-four
46	_____	65	<u> </u> five
47	_____	66	_____
48	<u> </u> -eight	67	_____
49	_____	<u> </u>	sixty- _____
<u>50</u>	fifty	69	_____
<u>51</u>	<u> </u> -one	70	_____
52	fifty- _____	<u> </u>	seventy-one
53	_____	<u> </u>	<u> </u> -two
<u>54</u>	fifty-four	<u> </u>	seventy-three
55	_____	74	_____
<u>56</u>	<u> </u> -six		

TOTAL POINTS	NUMBER CORRECT
40	

LEVEL	UNIT	SKILL	PAGE
E	01	4	2

Write in the missing numerals and number words.

_____	seventy-five	89	_____ -nine
76	_____ -six	_____	ninety
77	_____	91	_____ -one
_____	seventy-eight	92	_____
79	_____	93	_____ -three
<u>80</u>	eighty	_____	ninety-four
81	_____ -one	95	_____
82	_____	96	ninety-_____
_____	eighty-three	97	_____
84	_____	_____	ninety-_____
_____	_____ -five	99	_____
86	_____	_____	one hundred
_____	eighty-seven	101	one _____ one
88	_____	102	one _____

What comes after eighty six? _____

What comes before ninety-one? _____

What comes after ninety-nine? _____

TOTAL POINTS	NUMBER CORRECT
33	

LEVEL	UNIT	SKILL	PAGE
E	01	4	3

Write the numeral for each number word.

thirteen 13

ninety-one

thirty-three

ninety-two

thirty-one 31

ninety-three

thirty 30

thirty-nine

Write the number words for these numerals.

6 six

60 sixty

66 sixty-six

33 thirty-three

34 thirty-four

35 thirty-five

53 fifty-three

15 fifteen

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	4	4

Write in the missing numerals and number words.

100	one <u>hundred</u>	(1 pt.)
101	one hundred <u>one</u>	(1 pt.)
102	<u>one</u> hundred <u>two</u>	(1 pt.)
<u>103</u>	one hundred three	(1 pt.)
104	<u>one</u> hundred <u>four</u>	(1 pt.)
105	one <u>hundred</u> <u>five</u>	(1 pt.)
106	<u>one</u> hundred <u>six</u>	(1 pt.)
107	<u>one</u> hundred <u>seven</u>	(1 pt.)
<u>108</u>	one hundred eight	(1 pt.)
109	<u>one</u> hundred <u>nine</u>	(1 pt.)
<u>110</u>	one hundred ten	(1 pt.)
111	one hundred <u>eleven</u>	(1 pt.)
<u>112</u>	<u>one</u> hundred <u>twelve</u>	(1 pt.)
<u>113</u>	one hundred thirteen	(1 pt.)
114	one hundred <u>fourteen</u>	(1 pt.)
115	<u>one</u> hundred <u>fifteen</u>	(1 pt.)
<u>116</u>	one hundred <u>sixteen</u>	(1 pt.)
<u>117</u>	one hundred seventeen	(1 pt.)

TOTAL POINTS	NUMBER CORRECT
18	

LEVEL	UNIT	SKILL	PAGE
E	01	4	5

Write the missing numerals and number words.

150	one _____ fifty	
151	_____	(1 pt)
_____	one hundred fifty-two	(1 pt)
153	_____	(1 pt)
154	one _____	(1 pt)
155	_____	(1 pt)
_____	one hundred fifty-six	(1 pt)
_____	one hundred _____	(1 pt)
158	_____	(1 pt)
159	_____	(1 pt)
160	one hundred _____	

250	<u>two</u> hundred fifty	(1 pt)
251	two _____	(1 pt)
252	_____	(1 pt)
<u>253</u>	two hundred fifty-three	(1 pt)
254	_____	(1 pt)
<u>255</u>	two hundred fifty-five	(1 pt)

TOTAL POINTS	NUMBER CORRECT
17	

LEVEL	UNIT	SKILL	PAGE
E	01	4	6

Write the missing numerals or number words.

_____	two hundred ninety-five	(1 pt)
296	two hundred ninety-_____	(1 pt)
297	<u>two</u> <u>hundred</u> <u>ninety-seven</u>	(1 pt)
298	<u>two</u> <u>hundred</u> <u>ninety-eight</u>	(1 pt)
299	<u>two</u> hundred ninety-nine	(1 pt)
300	<u>three</u> hundred	(1 pt)
301	_____ <u>one</u>	(1 pt)
<u>302</u>	three hundred two	(1 pt)
303	<u>three</u> <u>hundred</u> <u>three</u>	(1 pt)
304	<u>three</u> hundred _____	(1 pt)

403	<u>four</u> hundred _____	(1 pt)
503	<u>five</u> hundred _____	(1 pt)
603	<u>six</u> <u>hundred</u> <u>three</u>	(1 pt)
700	seven _____	(1 pt)
900	<u>nine</u> hundred	(1 pt)
1,000	<u>one</u> thousand	(1 pt)

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	4	7

Write the number words for these numerals.

100	<u>one hundred</u>	(1 pt.)
101	<u>one hundred one.</u>	(1 pt.)
102	<u>one hundred two</u>	(1 pt.)
120	<u>one hundred twenty</u>	(1 pt.)
121	<u>one hundred twenty - one</u>	(1 pt.)
131	<u>one hundred thirty - one</u>	(1 pt.)
231	<u>two hundred thirty - one</u>	(1 pt.)

Write the numerals for these number words.

<u>768</u>	seven hundred sixty-eight
<u>409</u>	four hundred nine
<u>235</u>	two hundred thirty-five
<u>935</u>	nine hundred thirty-five
<u>918</u>	nine hundred eighteen
<u>981</u>	nine hundred eighty-one
<u>801</u>	eight hundred one

For extra practice, do Page 18.

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	4	8

Write the missing numerals and number words.

997

_____ nine hundred ninety eight

999

1,000

_____ thousand

1,001

one _____

1,002

_____ thousand _____

_____ one thousand three

1,004

1,015

one thousand _____

1,016

_____ thousand _____ sixteen

1,017

_____ thousand _____

_____ one thousand eighteen

1,019

_____ thousand _____

1,020

one thousand _____

1,021

_____ thousand _____

TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
E	01	4	9

Write the missing numerals and number words.

1,097	one thousand <u> ninety-seven </u>	(1 pt.)
1,098	<u> one </u> <u> thousand </u> <u> ninety-eight </u>	(1 pt.)
1,099	one thousand ninety-nine	(1 pt.)
1,100	one thousand one hundred	
1,101	one thousand one hundred <u> one </u>	(1 pt.)
1,102	<u> one </u> <u> thousand </u> <u> one </u> <u> hundred </u> <u> two </u>	(1 pt.)
<u> 1,103 </u>	one thousand one hundred three	(1 pt.)
1,104	<u> one </u> <u> thousand </u> <u> one </u> <u> hundred </u> <u> four </u>	(1 pt.)
1,105	<u> one </u> <u> thousand </u> <u> one </u> <u> hundred </u> <u> five </u>	(1 pt.)
1,125	one thousand one hundred <u> twenty-five </u>	(1 pt.)
1,126	<u> one </u> <u> thousand </u> <u> one </u> <u> hundred </u> <u> twenty-six </u>	(1 pt.)
<u> 1,127 </u>	one thousand one hundred twenty-seven	(1 pt.)
1,128	<u> one </u> <u> thousand </u> <u> one </u> <u> hundred </u> <u> twenty-eight </u>	(1 pt.)
<u> 1,129 </u>	one thousand one hundred twenty-nine	(1 pt.)
1,130	<u> one </u> <u> thousand </u> <u> one </u> <u> hundred </u> <u> thirty </u>	(1 pt.)
1,140	<u> one </u> <u> thousand </u> <u> one </u> <u> hundred </u> <u> forty </u>	(1 pt.)
For extra practice, do Page 19		

TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
E	01	4	10

Write the numeral for each of the number words.

seventy 70

seventy-eight 78

seven hundred eight 708

seven hundred eighty 780

seven thousand eight 7,008

seven thousand eighty 7,080

nineteen 19

ninety-one 91

twenty-nine 29

ninety-two 92

two hundred nine 209

nine hundred two 902

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	4	11

Write the number words for each numeral.

- 14 fourteen (1 pt)
- 41 forty-one (1 pt)
- 241 two hundred forty-one (1 pt)
- 1,241 one thousand two hundred forty-one (1 pt)
- 89 eighty-nine (1 pt)
- 890 eight hundred ninety (1 pt)
- 8,900 eight thousand nine hundred (1 pt)
- 8,989 eight thousand nine hundred eighty-nine (1 pt)
- 5,000 five thousand (1 pt)
- 500 five hundred (1 pt)
- 50 fifty (1 pt)
- 5 five (1 pt)
- 5,555 five thousand five hundred fifty-five (1 pt)

TOTAL POINTS	NUMBER CORRECT
13	

LEVEL	UNIT	SKILL	PAGE
		4	12

Some numerals are read in a special way.

YEARS 1958 1800 1806

When the YEAR is written in numerals, like 1958 above, you read it
"nineteen fifty-eight."

Leave out the word hundred, and divide
the numeral into two parts

19	58
----	----

"nineteen; fifty-eight"

But:

18	00
----	----

"eighteen; hundred"

and

18	06
----	----

"eighteen; oh-six"

Write the words you would use to say the following years.

1620 sixteen twenty

1066 ten sixty-six

1200 twelve hundred

1492 fourteen ninety-two

1902 nineteen oh-two

Notice that there is no comma when a year is written in numerals. 1902
is a year. 1,902 is not a year.

TOTAL POINTS	NUMBER CORRECT
5	

LEVEL	UNIT	SKILL	PAGE
E	01	4	13

This is a list of number words for reading years.

Write each year in numerals.

Remember, the comma is not used in writing a year in numerals.

twelve twenty 1220

eighteen seventy 1870

nineteen sixty 1960

nineteen hundred 1900

nineteen ninety 1990

nineteen oh four 1904

two thousand 2000

ten ten 1010

Write the correct number words.

1,942 (the numeral) is read as

one thousand nine hundred forty-two (1 pt.)

1942 (the year-no comma) is read as

nineteen forty-two (1 pt.)

1700 is read as

seventeen hundred (1 pt.)

1,700 is read as

one thousand seven hundred (1 pt.)

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	4	14

Telephone numbers are read in a special way.

Read each numeral separately. Say a series of single-place numerals.

882-6170 is read as

"eight eight two six one seven oh"

Write the words you would use to say these telephone numbers.

521-3523 five two one three five two three (1 pt)

471-2944 four seven one two nine four four (1 pt)

828-0358 eight two eight oh three five eight (1 pt)

661-4287 six one four two eight seven (1 pt)

TOTAL POINTS	NUMBER CORRECT
4	

LEVEL	UNIT	SKILL	PAGE
E	01	4	15

When you see a money symbol, such as \$2.13, you know that the numerals to the left of the decimal point stand for dollars, and the numerals to the right of the decimal point stand for cents.

Read \$2.38 as "two dollars and thirteen cents."

Read \$.25 as "twenty-five cents."

Read \$3.00 as "three dollars."

Write the words you would use to say these amounts of money.

- \$ 18.00 eighteen dollars (1 pt)
- \$ 7.20 seven dollars and twenty cents (1 pt)
- \$ 3.72 three dollars and seventy-two cents (1 pt)
- \$.56 fifty-six cents (1 pt)
- \$ 1.08 one dollar and eight cents (1 pt)
- \$121.35 one hundred twenty-one dollars and thirty-five cents (1 pt)

For extra practice, do Page 20.

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	4	16

CET I

Write the numerals for these number words.

two thousand four hundred nineteen _____

three hundred fifty-two _____

eight thousand six _____

C I R C L E	TL. PTS.	
	5	100%
	NO. OF PTS.	%
	4	80
	3	60
	2	40
C O R R E C T	1	20
B O X		

Write the number words for these numerals.

783 _____

8,052 _____

Write a decimal numeral for each fraction.

$\frac{8}{10}$ _____

$37\frac{37}{100}$ _____

$4\frac{5}{10}$ _____

$93\frac{6}{100}$ _____

$123\frac{6}{10}$ _____

$212\frac{52}{100}$ _____

C I R C L E	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
C O R R E C T	2	33
	1	17
B O X		

LEVEL	UNIT	SKILL	PAGE
E	01	4	17

Fill in the blanks to complete the number words for these numerals.

120 one hundred twenty

121 one hundred twenty-one

122 one hundred twenty-two

123 one hundred twenty-three

225 two hundred twenty-three

323 three hundred twenty-three

Write the numerals for these number words.

five hundred 500

four hundred 400

four hundred fifty-one 451

four hundred fifty-two 452

four hundred fifty-three 453

four hundred fifty-four 454

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	4	18

Write the missing numerals and number words.

<u>1,140</u>	one thousand one hundred forty
1,150	<u>one thousand one hundred fifty</u> (1 pt)
<u>1,160</u>	one thousand one hundred sixty
1,260	one thousand <u> </u> hundred sixty
1,360	<u>one thousand three hundred sixty</u> (1 pt)
<u> </u>	one thousand four hundred sixty
2,460	<u> </u> thousand four hundred sixty
<u> </u>	three thousand four hundred sixty
<u> </u>	five thousand four hundred sixty
6,460	<u> </u> thousand four hundred sixty
6,560	six thousand <u>five</u> hundred sixty
6,660	<u>six thousand six hundred sixty</u> (1 pt)
7,660	<u>seven thousand six hundred sixty</u> (1 pt)
8,760	<u>eight</u> thousand <u>seven</u> hundred <u> </u> (1 pt)
8,761	<u>eight</u> thousand <u>seven</u> hundred <u>sixty-one</u> (1 pt)
<u>8,762</u>	eight thousand seven hundred sixty-two
9,762	<u>nine thousand seven hundred sixty-two</u> (1 pt)

TOTAL POINTS	NUMBER CORRECT
17	

LEVEL	UNIT	SKILL	PAGE
E	01	4	19

This is the way to read and write money symbols in number words.

\$12.34

The numerals on
this side of the
decimal point
stand for dollars.

The numerals on
this side of the
decimal point
stand for cents.

Say,

"twelve dollars and thirty-four cents."

Rewrite these money symbols in number words.

\$ 2.16

two dollars and sixteen cents

\$ 5.02

five dollars and two cents

\$21.35

twenty-one dollars and thirty-five cents

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	4	20

CET II

Write the number words for these numerals.

7,365 _____

9,006 _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	5	100%
	NO. OF PTS.	%
	4	80
	3	60
	2	40
	1	20

Write the numerals for these number words.

Seven thousand four _____

Nine thousand six hundred one _____

Four hundred twenty-seven _____

Write a decimal numeral for each fraction.

$\frac{9}{10}$ _____

$37\frac{41}{100}$ _____

$3\frac{7}{10}$ _____

$23\frac{9}{100}$ _____

$126\frac{13}{100}$ _____

$131\frac{3}{10}$ _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

LEVEL	UNIT	SKILL	PAGE
E	01	4	21

LEVEL E, NUMERATION, SKILL 4

OBJECTIVE: Gives the standard numeral for a 2-, 3-, or 4-place number written in words and writes a 2-, 3-, or 4-place number in words.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Writes numeral or number words to complete chart; numbers from zero to 33.	
2.	Writes numerals or number words to complete chart; numbers from 38 to 74.	
3.	Writes numerals or number words to complete chart; numbers from 75 to 102.	
4.	Writes numeral for number words or number words for numerals, as requested, for numbers under 100.	
5.	Writes number words or numerals to complete chart; numbers from 100 to 117.	
6.	Writes numerals or number words to complete chart; numbers from 150 to 160 and from 250 to 255.	
7.	Writes numerals or number words to complete number chart; for numbers from 295 to 304 and for non-sequential set of numbers up to 1000.	
8.	Writes numerals for number words and number words for numerals as requested, for numbers under 1000.	18
9.	Writes numerals or number words to complete chart; numbers from 997 to 1,004 and from 1,015 to 1,021.	
10.	Writes numerals and number words to complete chart; numbers from 1,097 to 1,105 and from 1,125 to 1,140.	19
11.	Writes numerals for number words, as requested, for 2-, 3-, and 4-place numbers.	
12.	Writes number words for numerals, as requested, for 2-, 3-, and 4-place numbers.	
13.	Writes words used to read a date, given the year in numerals.	
14.	Writes numerals for years given in words; distinguishes numerals which symbolize numbers from numerals which symbolize years (no comma), and writes appropriate number words.	
15.	Writes telephone number in number words.	
16.	Writes money symbols in number words and "dollars" and "cents."	20
17.	CET I.	
	CET II.	21

Circle pages that are to be done.

Standard Teaching Sequence, Con't.

1967-68

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 3		73

SCHOOL CODE

NAME _____

NUMBER _____

CLASS _____

*Individually prescribed instruction***MATHEMATICS**

Standard Teaching Sequence Booklet

TEACHER'S EDITION**LEVEL E****NUMERATION (01)****SKILL 5**

Based upon materials developed by The Mathematics Curriculum Staff,
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Written by the staff of Appleton-Century-Crofts under the direction of
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Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Can you change these common fractions into decimal numbers?

$$\frac{3}{10} \quad \underline{\hspace{1cm}}$$

$$4\frac{72}{100} \quad \underline{\hspace{1cm}}$$

You will learn how in this booklet.

Answers

.3

4.72

Do you remember how to write common fractions for tenths and hundredths as decimal numbers?

Here are a few examples.

Common fraction

Decimal number

$$\frac{1}{10}$$

.1

$$\frac{3}{10}$$

.3

$$5\frac{9}{10}$$

5.9

How many places to the right of the decimal point is the tenths' place? 1 place

Common fraction

Decimal number

$$\frac{6}{100}$$

.06

$$\frac{28}{100}$$

.28

$$4\frac{55}{100}$$

4.55

How many places to the right of the decimal point is the hundredths' place?

2 places

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	
2	01	5	1

When you write a decimal number, the decimal point should remind you that you are writing a fraction, not a whole number.

Write these fractions as decimal numbers.

$$\frac{5}{10} = \underline{.5}$$

$$\frac{25}{100} = \underline{.25}$$

$$\frac{4}{100} = \underline{.04}$$

$$\frac{17}{100} = \underline{.17}$$

$$\frac{67}{100} = \underline{.67}$$

$$\frac{2}{10} = \underline{.2}$$

Write these decimal numbers as common fractions.

$$.4 = \underline{\frac{4}{10}}$$

$$.35 = \underline{\frac{35}{100}}$$

$$.07 = \underline{\frac{7}{100}}$$

$$.96 = \underline{\frac{96}{100}}$$

$$.03 = \underline{\frac{3}{100}}$$

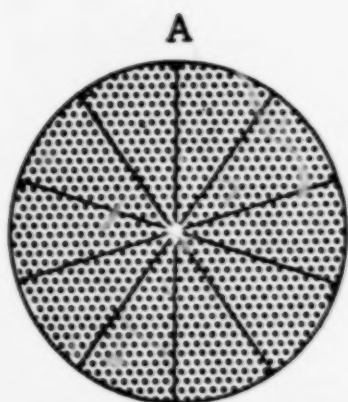
$$.8 = \underline{\frac{8}{10}}$$

TOTAL POINTS	NUMBER CORRECT
12	

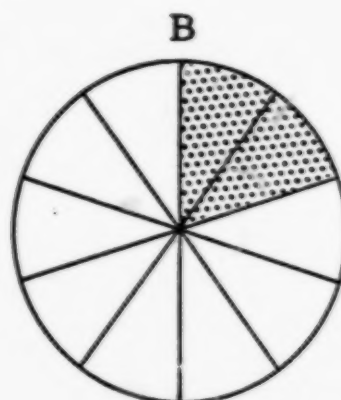
LEVEL	UNIT	SKILL	PAGE
F	01	5	2

Look at the following figures. How much of circle A is shaded? $\frac{10}{10}$

How much of circle B is shaded? $\frac{2}{10}$



$\frac{10}{10}$ or 1 whole



$\frac{2}{10}$

For circles A and B together, it is correct to say that one and two tenths of the circles are shaded. You can write a number for one and two tenths by writing the whole number part and then the fraction part.

$$\text{one and two tenths} = 1\frac{2}{10}$$

A number with a whole number part and a fraction part is called a mixed fraction.

Write the mixed fraction for these number words.

$$\text{one and four tenths} = 1\frac{4}{10}$$

$$\text{three and six hundredths} = 3\frac{6}{100}$$

$$\text{six and twenty-five hundredths} = 6\frac{25}{100}$$

$$\text{eight and one tenth} = 8\frac{1}{10}$$

For extra practice, do Page 10.

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	5	3

Suppose you have twenty-five whole circles and five tenths of another circle. You have a total of twenty-five and five tenths circles. Mixed fractions for larger numbers are written the same way as for smaller numbers. First write the whole number part, then write the fraction part after it.

$$\text{twenty-five and five tenths} = 25\frac{5}{10}$$

To write the decimal for any number, first write the whole number part, then a decimal point, then the number of tenths or hundredths in the fraction part.

$$\text{twenty-five and five tenths} = 25\frac{5}{10} = 25.5$$

Fill the blank spaces below.

	Mixed fraction	Decimal number
sixty-seven and five hundredths	<u>67$\frac{5}{100}$</u>	<u>67.05</u>
fifty and forty-two hundredths	<u>50$\frac{42}{100}$</u>	<u>50.42</u>
fifteen and two tenths	<u>15$\frac{2}{10}$</u>	<u>15.2</u>
twenty-three and seventeen hundredths	<u>23$\frac{17}{100}$</u>	<u>23.17</u>

For extra practice do Page 11.

TOTAL POINTS	NUMBER CORRECT
5	

LEVEL	UNIT	SKILL	PAGE
E	01	5	4

You can write mixed fractions as decimal numbers. To write a mixed fraction as a decimal number, write the whole number part, a decimal point, and then the number of tenths or hundredths in the fraction part.

$$3\frac{5}{10} = \text{three and five tenths} = 3.5$$

Write these mixed fractions as decimal numbers.

$$6\frac{2}{10} = \underline{6.2}$$

$$41\frac{8}{10} = \underline{41.8}$$

$$4\frac{7}{100} = \underline{4.07}$$

$$106\frac{33}{100} = \underline{106.33}$$

$$32\frac{5}{10} = \underline{32.5}$$

$$92\frac{46}{100} = \underline{92.46}$$

$$63\frac{26}{100} = \underline{63.26}$$

$$4\frac{3}{100} = \underline{4.03}$$

Write these decimal numbers as mixed fractions.

$$6.4 = \underline{6\frac{4}{10}}$$

$$19.5 = \underline{19\frac{5}{10}}$$

$$8.23 = \underline{8\frac{23}{100}}$$

$$11.36 = \underline{11\frac{36}{100}}$$

$$9.06 = \underline{9\frac{6}{100}}$$

$$43.07 = \underline{43\frac{7}{100}}$$

$$22.31 = \underline{22\frac{31}{100}}$$

$$36.92 = \underline{36\frac{92}{100}}$$

For extra practice do Page 12.

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	5	5

Draw a circle around the mixed fraction that means the same as the decimal number.

56.3

$$56\frac{3}{10}$$

$$56\frac{3}{100}$$

$$5\frac{63}{100}$$

.67

$$6\frac{7}{10}$$

$$6\frac{7}{100}$$

$$6\frac{67}{100}$$

18.54

$$185\frac{4}{10}$$

$$18\frac{54}{100}$$

$$185\frac{4}{100}$$

37.08

$$37\frac{8}{100}$$

$$37\frac{8}{10}$$

$$370\frac{8}{10}$$

72.63

$$72\frac{63}{10}$$

$$726\frac{3}{10}$$

$$72\frac{63}{100}$$

Draw a circle around the decimal number that means the same as the mixed fraction.

$$4\frac{3}{100}$$

$$4.03$$

4.3

4.30

$$73\frac{7}{10}$$

73.07

73.7

7.37

$$62\frac{23}{100}$$

62.23

622.3

62.32

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	5	6

Write as mixed fractions.

Write as decimal numbers.

126.7 = $126\frac{7}{10}$

$57\frac{3}{10} =$ _____

31.81 = _____

$149\frac{27}{100} =$ _____

58.31 = _____

$500\frac{6}{100} =$ _____

672.69 = _____

$\frac{18}{100} =$ _____

147.03 = _____

$82\frac{70}{100} =$ _____

52.06 = _____

$365\frac{21}{100} =$ _____

11.43 = _____

$721\frac{6}{10} =$ _____

225.25 = _____

$8\frac{35}{100} =$ _____

For extra practice do Page 13.

AL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	5	7

Match the mixed fractions and decimal numbers by writing a letter in each blank.

c 1) 5.66

a) $5\frac{81}{100}$

d 2) 42.3

b) $67\frac{1}{10}$

e 3) 5.81

c) $5\frac{66}{100}$

f 4) 67.1

d) $42\frac{3}{10}$

g 1) $9\frac{9}{10}$

a) 9.09

h 2) $9\frac{9}{100}$

b) 99.9

i 3) $9\frac{99}{100}$

c) 9.99

j 4) $99\frac{9}{10}$

d) 9.9

k 1) 22.5

a) $2\frac{5}{100}$

l 2) 2.25

b) $22\frac{5}{10}$

m 3) 2.2

c) $2\frac{2}{10}$

n 4) 2.05

d) $2\frac{25}{100}$

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	5	8

CET I

D Write the mixed or common fraction for each decimal number.

1.37 _____

.03 _____

624.03 _____

6.1 _____

82.9 _____

27.45 _____

Write the decimal number for each fraction.

 $42\frac{3}{10}$ _____ $1\frac{4}{10}$ _____ $901\frac{15}{100}$ _____ $\frac{5}{100}$ _____ $24\frac{2}{100}$ _____ $\frac{7}{10}$ _____

Write the decimal for these number words.

three hundred and sixty-seven thousandths _____

two and eight thousandths _____

forty-three and seventy-eight thousandths _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	3	100%
	NO. OF PTS.	%
	2	67
	1	33

LEVEL	UNIT	SKILL	PAGE
E	01	5	9

A number which has a whole number part and a fraction part is called a mixed fraction.

This is an example.

$$\text{one and two tenths} = 1\frac{2}{10}$$

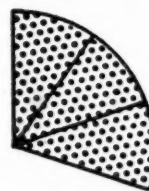
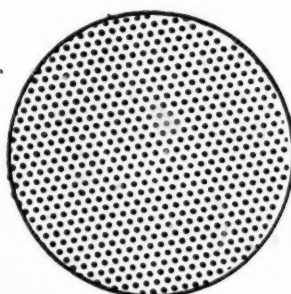
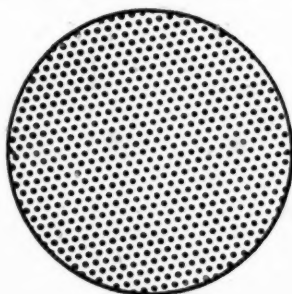
Draw a circle around each of these numbers which is a mixed fraction.

$$7\frac{9}{100}$$

$$\frac{3}{10}$$

$$8\frac{4}{10}$$

4

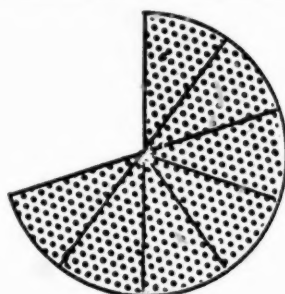
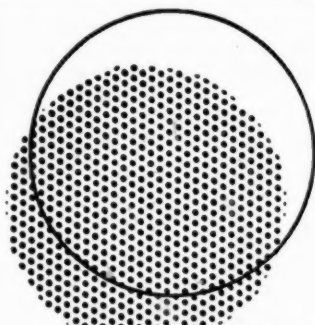


How many whole circles are there? 2

What fraction of a circle is there? $\frac{3}{10}$

Together there are two and three tenths circles.

Write two and three tenths as a mixed fraction. $2\frac{3}{10}$



How many whole circles are there? 1

What fraction of a circle is there? $\frac{7}{10}$

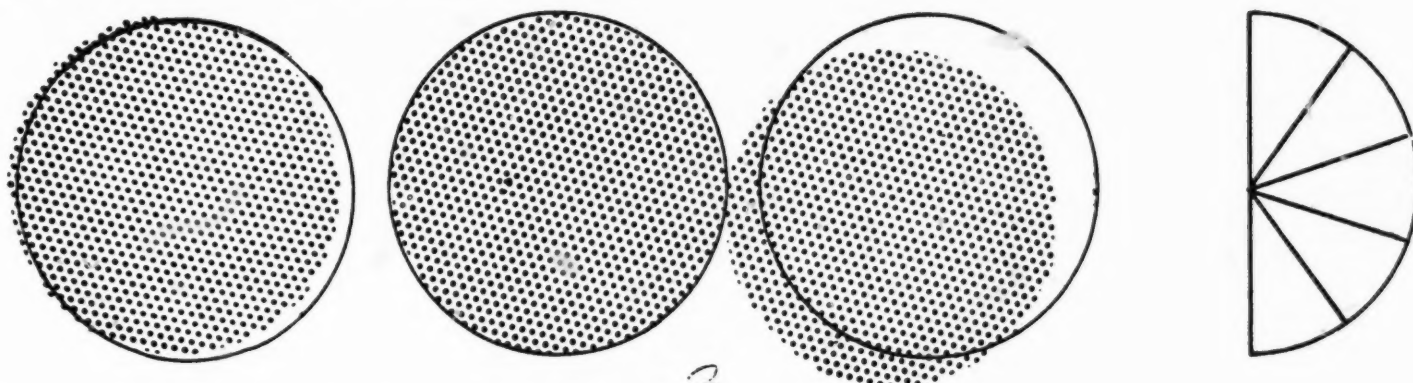
Together there are one and seven tenths circles.

Write one and seven tenths as a mixed fraction. $1\frac{7}{10}$

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
E	01	5	10

When you write a mixed fraction for number words, write the whole number part first and then the fraction part.



How many whole circles are there? 3

What fraction of a circle is there? $\frac{1}{5}$

Write a mixed fraction telling how many circles there are. $3\frac{1}{5}$

Write the mixed fractions for the following number words.

one and seven tenths = $1\frac{7}{10}$

four and twenty-one hundredths = $4\frac{21}{100}$

nine and nine tenths = $9\frac{9}{10}$

three and five tenths = $3\frac{5}{10}$

six and seven hundredths = $6\frac{7}{100}$

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	5	11

Write these mixed fractions as decimal numbers. Remember that the decimal point separates the whole number part from the fraction part.

$$6\frac{7}{10} = \underline{6.7}$$

$$31\frac{25}{100} = \underline{31.25}$$

$$1\frac{14}{100} = \underline{1.14}$$

$$67\frac{5}{10} = \underline{67.5}$$

$$2\frac{7}{100} = \underline{2.07}$$

$$19\frac{72}{100} = \underline{19.72}$$

$$14\frac{9}{10} = \underline{14.9}$$

$$43\frac{4}{100} = \underline{43.04}$$

Write these decimal numbers as mixed fractions. Remember that the digits after the decimal point show the fractional part of the number.

$$3.8 = \underline{3\frac{8}{10}}$$

$$94.08 = \underline{94\frac{8}{100}}$$

$$6.91 = \underline{6\frac{91}{100}}$$

$$37.53 = \underline{37\frac{53}{100}}$$

$$7.02 = \underline{7\frac{2}{100}}$$

$$49.99 = \underline{49\frac{99}{100}}$$

$$25.2 = \underline{25\frac{2}{10}}$$

$$75.05 = \underline{75\frac{5}{100}}$$

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	5	12

Write a mixed fraction for each decimal number.

$$2.5 = 2\frac{5}{10}$$

$$8.7 = \underline{\hspace{2cm}}$$

$$9.25 = \underline{\hspace{2cm}}$$

$$25.48 = \underline{\hspace{2cm}}$$

$$5.63 = \underline{\hspace{2cm}}$$

$$679.42 = \underline{\hspace{2cm}}$$

$$32.24 = \underline{\hspace{2cm}}$$

$$98.68 = \underline{\hspace{2cm}}$$

Write the decimal fraction for each number.

$$\frac{2}{10} = \underline{.2}$$

$$43\frac{57}{100} = \underline{\hspace{2cm}}$$

$$4\frac{5}{10} = \underline{\hspace{2cm}}$$

$$568\frac{4}{10} = \underline{\hspace{2cm}}$$

$$22\frac{3}{10} = \underline{\hspace{2cm}}$$

$$55\frac{55}{100} = \underline{\hspace{2cm}}$$

$$10\frac{23}{100} = \underline{\hspace{2cm}}$$

$$\frac{9}{100} = \underline{\hspace{2cm}}$$

TOTAL POINTS	NUMBER CORRECT
16	

LEVEL	UNIT	SKILL	PAGE
E	01	5	13

CET II

Write the decimal number for each fraction.

$33\frac{3}{10}$ _____

$9\frac{5}{10}$ _____

$687\frac{14}{100}$ _____

$\frac{2}{100}$ _____

$27\frac{45}{100}$ _____

$\frac{6}{10}$ _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	12	100%
	NO. OF PTS.	%
	11	92
	10	83
	9	75
	8	67
	7	58
	6	50
	5	42
	4	33
	3	25
	2	17
	1	8

Write the mixed or common fraction for each decimal number.

2.48 _____

$.09$ _____

335.06 _____

5.1 _____

57.8 _____

42.27 _____

Write the decimal number for these number words.

two and nine thousandths _____

eighty-one and seventy-two hundredths _____

one hundred thirty and four tenths _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	3	100%
	NO. OF PTS.	%
	2	67
	1	33

LEVEL	UNIT	SKILL	PAGE
E	01	5	14

OBJECTIVE: Writes the correct decimal fraction for a common or mixed fraction having a denominator of either ten or one hundred, and vice versa.

STANDARD TEACHING SEQUENCE

Page	Supplementary Material
1. Reviews writing fractions as decimal numbers.	
2. Writes fractions as decimal numbers, and vice versa.	
3. Writes mixed fractions for number words.	10
4. Writes number words, mixed fractions, and decimal numbers.	11
5. Writes mixed fractions as decimal numbers, and vice versa.	12
6. Selects mixed fraction that means same as decimal number, and vice versa.	
7. Writes decimal number as mixed fraction, and vice versa.	13
8. Matches mixed fractions and decimal numbers.	
9. CET I.	
CET II.	14

Circle pages that are to be done.

Standard Teaching Sequence, Con't.

1967-68

Teaching Aids:

Ideal Place Value Cards

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 5	235, 236	
Harcourt, Brace & World, 1966 <u>Elementary Mathematics</u> - 6	77, 81	

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____



individualized prescribed instruction

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL E

NUMERATION (01)

SKILL 6

Based upon materials developed by The Mathematics Curriculum Staff,
Learning Research and Development Center, University of Pittsburgh; Joseph
I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of
Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Write the mixed decimal fractions named by the number words.

fifteen and twelve thousandths _____

sixty-three and nine hundred forty-one thousandths _____

Answers

15.012
63.941

Write the fractions.

If you divided an object equally into 1,000 parts, one of these parts would be

$\frac{1}{1,000}$ of the object. ($\frac{1}{1,000}$ is read "one thousandth.")

How would you write 2 parts of the object? $\frac{2}{1000}$

3 parts? $\frac{3}{1000}$

10 parts? $\frac{10}{1000}$

30 parts? $\frac{30}{1000}$

100 parts? $\frac{100}{1000}$

557 parts? $\frac{557}{1000}$

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
R	01	A	1

Here is a value chart.

	hundreds	tens	ones	tenths	hundredths	thousandths
				.1		one tenth
				.0	1	one hundredth
				.0	0	1 one thousandth

Write as a fraction.

.1 means $\frac{1}{10}$

.01 means $\frac{1}{100}$

.001 means $\frac{1}{1000}$

.005 means $\frac{5}{1000}$

.018 means $\frac{18}{1000}$

Write the fraction.

seven thousandths $\frac{7}{1000}$

eighty-one thousandths $\frac{81}{1000}$

one hundred one thousandths $\frac{101}{1000}$

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	6	2

Fill in the chart.

Number Words

Fraction

Decimal Fraction

seven thousandths

$$\frac{7}{1000}$$

$$.007$$

seventeen thousandths

$$\frac{17}{1000}$$

$$.017$$

twenty-five thousandths

$$\frac{25}{1000}$$

$$.025$$

forty-four thousandths

$$\frac{44}{1000}$$

$$.044$$

one hundred twelve thousandths

$$\frac{112}{1000}$$

$$.112$$

two hundred forty thousandths

$$\frac{240}{1000}$$

$$.240$$

seven hundred thousandths

$$\frac{700}{1000}$$

$$.700$$

seven hundred fifty thousandths

$$\frac{750}{1000}$$

$$.750$$

thirty thousandths

$$\frac{30}{1000}$$

$$.030$$

TOTAL POINTS	NUMBER CORRECT
18	

LEVEL	UNIT	SKILL	PAGE
E	01	6	3

A decimal fraction for thousandths has 3 digits after the decimal point.

Write a decimal fraction for these number words.

one thousandth .001

four thousandths .004

thirty-five thousandths .035

three hundred twenty-seven thousandths .327

eight thousandths .008

fifty thousandths .050

one hundred thousandths .100

one hundred five thousandths .105

seven hundred forty thousandths .740

two hundred fifty-three thousandths .253

five thousandths .005

twenty thousandths .025

For extra practice, do Page 14.

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	6	4

Circle the correct number word for each of the following decimal fractions.

.008 eight-tenths
 eight hundredths
 eight thousandths

.04 four tenths
 four hundredths
 four thousandths

.006 six tenths
 six hundredths
 six thousandths

.3 three tenths
 three hundredths
 three thousandths

.07 seven tenths
 seven hundredths
 seven thousandths

.1 one tenth
 one hundredth
 one thousandth

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	6	5

The place value of the last digit tells us how to read a decimal fraction.

Circle the number words named by the decimal fractions.

Decimal

Number Words

.11

eleven tenths

(eleven hundredths)

one hundredth

.011

one thousandth

eleven hundredths

eleven thousandths

.020

twenty thousandths

twenty hundredths

two thousandths

.500

five thousandths

five hundred

five hundred thousandths

.008

eight thousandths

eight tenths

eight hundred thousandths

For extra practice, do Page 15.

TOTAL POINTS	NUMBER CORRECT
5	

LEVEL	UNIT	SKILL	PAGE
E	01	6	6

Here is a mixed decimal fraction.

$\begin{array}{ccc} 4 & . & 25 \\ \swarrow & \downarrow & \swarrow \\ \text{four} & \text{and} & \text{twenty-five hundredths} \end{array}$

The word "and" separates the whole number from the decimal fraction.

4.25 can be written as $4\frac{25}{100}$ or $\frac{425}{100}$.

Now study this example.

$\begin{array}{cccc} 6 & . & 3 & 4 & 4 \\ \swarrow & \downarrow & & \swarrow & \\ \text{six} & \text{and} & \text{three hundred} & \text{forty-four} & \text{thousandths} \end{array}$

This mixed decimal fraction can also be written like this.

$6.344 = 6\frac{344}{1000}$ or $\frac{6344}{1000}$

Fill in the blanks.

6 and 75 hundreds is the same as 6.75

2 and 313 thousandths is the same as 2.313

3 and 5 tenths is the same as 3.5

14 and 37 hundredths is the same as 14.37

TOTAL POINTS	NUMBER CORRECT
3	

LEVEL	UNIT	SKILL	PAGE
E	01	6	7

Draw a circle around the whole number part of the mixed decimal fraction.

.67

.676

6.6764.13

.413

.41

.03

3.03

.345

6.91

.69

.697

Circle the mixed decimal fraction named by the number words.

.67

six and seven tenths.

6.7

6.07

.905

nine and five hundredths.

9.005

9.05

1.012

ten and twelve hundredths

10.12

.1012

13.20

thirteen and twenty hundredths

1.320

.1320

For extra practice, do page 16.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	6	8

Draw a circle around the mixed decimal fraction for these number words.

sixteen and four thousandths

16.4

16.04

(16.004)

eight and fourteen thousandths

(8.014)

8.14

81.4

twenty-one and seven thousandths

21.7

(21.007)

21.07

twenty-five and one hundred thousandths

25.001

25.1

(25.100)

thirty-three and thirty-three thousandths

(33.033)

33.33

33.330

forty and four thousandths

40.40

(40.004)

40.400

TOTAL POINTS	NUMBER CORRECT
6	

LEVEL	UNIT	SKILL	PAGE
E	01	6	9

Write the mixed decimal fraction for these number words.

seven and three-tenths

7.3

eight and five hundredths

8.05

five and two thousandths

5.002

four and fifteen hundredths

4.15

ten and eleven thousandths

10.011

sixteen and twelve thousandths

16.012

twenty and one hundred thousandths

21.100

twenty-one and thirty hundredths

21.30

fourteen and seventy-one hundredths

14.71

one and one thousandth

1.001

two and two hundredths

2.02

nine and seven-tenths

9.7

For extra practice, do Page 17.

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	6	10

As you have learned, there is more than one way to write a mixed decimal fraction.

4.25 may be written $\frac{425}{100}$ or $4\frac{25}{100}$ or 4 and 25 hundredths.

Another way to write 4.25 is 425 hundredths.

Now read the number words and fill in the blanks.

$$4\ 2\ 5\ \text{hundredths} = 4.25$$

$$3\ 3\ 0\ \text{hundredths} = \underline{3.30}$$

$$5\ 3\ 4\ 2\ \text{thousandths} = \underline{5.342}$$

$$3\ 5\ \text{tenths} = \underline{3.5}$$

$$6\ 3\ \text{tenths} = \underline{6.3}$$

$$\underline{9\ 71\ \text{hundredths}} = 9.71$$

TOTAL POINTS	NUMBER CORRECT
5	

LEVEL	UNIT	SKILL	PAGE
E	01	6	11

Write the mixed decimal fraction for these number words.

Thirty and four hundred twenty-five thousandths

30.425

Six and four tenths

6.4

Eighty and two hundredths

80.02

fifty-three and seven hundred nine thousandths

53.709

thirty-seven and forty-nine hundredths

37.49

eighteen and three hundred ninety-nine thousandths

18.399

four hundred sixty-eight and three-tenths

468.3

one thousand and one hundredth

1000.01

sixty-seven and one hundred fifty thousandths

67.150

TOTAL POINTS	NUMBER CORRECT
9	

LEVEL	UNIT	SKILL	PAGE
E	01	6	12

CET I

Write the number words for these mixed decimal numerals.

Write the decimal numeral for these number words.

C I R C L E C O R R E C T B O X	TL. PTS.	
	7	100%
	NO. OF PTS.	%
	6	86
	5	71
	4	57
	3	43
	2	29
	1	14

Write these decimal numerals as mixed fractions.

7.883 = _____

100.001 = _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	4	100%
	NO. OF PTS.	
	3	75
	2	50
	1	25

LEVEL	UNIT	SKILL	PAGE
E	01	6	13

A decimal fraction for thousandths has 3 digits after the decimal point.

Circle the numerals below that are decimal fractions for thousandths.

(.375)

.4

(.006)

.20

(.029)

(.020)

.12

.76

Circle the decimal fraction that is the same as the number word.

seven thousandths

.7

.07

(.007)

forty thousandths

.4

.40

(.040)

six hundred fifty thousandths

(.650)

.065

.665

three thousandths

.03

.3

(.003)

seventeen thousandths

.17

(.017)

.170

TOTAL POINTS	NUMBER CORRECT
13	

LEVEL	UNIT	SKILL	PAGE
E	01	6	14

Write .600 in the place value chart below.

.	6	0	0
.	tenths	hundredths	thousandths

The last digit falls in the thousandths place, so .600 is read as

“six hundred thousandths.”

Circle the number words named by the decimal fractions.

.050 fifty hundredths
 (fifty thousandths)
 five thousandths

.006 six hundredths
 six hundred thousandths
 (six thousandths)

.015 (fifteen thousands)
 fifteen hundredths
 fifteen tenths

.720 seven hundred twenty
 seven hundred twenty hundredths
 (seven hundred twenty thousandths)

TOTAL POINTS	NUMBER CORRECT
5	

LEVEL	UNIT	SKILL	PAGE
E	01	6	15

A mixed decimal fraction has a whole number and a decimal fraction.

Study this example.

$\begin{array}{ccccccc} & 6 & . & 0 & 5 & 1 & \\ & \swarrow & \downarrow & & \searrow & & \\ \text{Six} & & \text{and} & & \text{fifty-one} & & \text{thousandths} \end{array}$

Circle the mixed decimal fraction named by the number words.

four and seven thousandths

4.7

4.07

(4.007)

eight and twelve hundredths

8.012

(8.12)

8.120

eleven and nineteen thousandths

(11.019)

11.19

11.190

one and five hundredths

1.50

1.005

(1.05)

TOTAL POINTS	NUMBER CORRECT
4	

LEVEL	UNIT	SKILL	PAGE
E	01	6	16

Write the mixed decimal fraction named by the number words.

Seventy-five and twenty-one thousandths

7 5 . 0 2 1

ninety-nine and twelve hundredths

99.12

three hundred and seven thousandths

300.007

one and six hundred fifty-five thousandths

1.655

forty-four and four thousandths

44.004

seventeen and six hundred thousandths

17.600

eighty and two hundredths

80.02

one hundred and sixteen hundredths

100.16

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
E	01	6	17

CET II

Write the decimal numeral for these number words.

nine and two hundredths _____

forty-six and three hundred twenty-two thousandths _____

five hundred one and eight-tenths _____

ninety and seven hundred three thousandths _____

Write the number words for these mixed decimal numerals.

26.04 _____

3.697 _____

5.9 _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	7	100%
	NO. OF PTS.	%
	6	86
	5	71
	4	57
	3	43
	2	29
	1	14

Write these decimal numerals as mixed fractions.

7.049 _____

9.854 _____

35.004 _____

100.09 _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	4	100%
	NO. OF PTS.	%
	3	75
	2	50
	1	25

LEVEL	UNIT	SKILL	PAGE
E	01	6	18

OBJECTIVE: Writes or selects number words for mixed decimal fractions to thousandths and vice versa.

STANDARD TEACHING SEQUENCE

Page	Supplementary Material
1. Writes fractional equivalents for parts of 1,000.	
2. Writes fractional equivalents for three-digit decimals.	
3. Fills in chart with fractional and decimal equivalents to number words.	
4. Writes decimal fractions (three-digit) for number words.	14
5. Circles number word for one-, two-, and three-digit decimals.	
6. Circles number words for decimals.	15
7. Explanation of mixed decimal fraction.	
8. Circles whole number part of mixed decimal fractions and circles mixed decimal fractions named by number words.	16
9. Circles mixed decimal fractions for number words.	
10. Writes mixed decimal fractions for number words.	17
11. Fills in blanks for mixed decimal fractions.	
12. Writes mixed decimal fractions for number words.	
13. CET I.	
CET II.	18

Circle pages that are to be done.

Standard Teaching Sequence, Con't.
1967-68

Teaching Aids:

Ideal Place Value Cards

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____


mathematics curriculum development
MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL E

NUMERATION (01)

SKILL 7

Based upon materials developed by The Mathematics Curriculum Staff,
Learning Research and Development Center, University of Pittsburgh; Joseph
I. Lipson, Ph.D., Director; Edith Kahut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of
Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Can you write these mixed fractions as mixed decimal fractions?

$$7\frac{3}{10} = \underline{\hspace{2cm}}$$

$$46\frac{237}{1000} = \underline{\hspace{2cm}}$$

$$33\frac{28}{100} = \underline{\hspace{2cm}}$$

You will learn how to do it in this booklet.

Answers

7.3

46.237

33.28

A common fraction is a fraction with no whole number part. $\frac{2}{3}$ is a common fraction.

A mixed fraction is a numeral with a whole number part and a fraction part.
 $2\frac{2}{3}$ is a mixed fraction.

Circle the common fractions below.

$$\boxed{6\frac{12}{100}}$$

.74

$$\left(\frac{7}{10}\right)$$

$$\boxed{4\frac{3}{4}}$$

$$\left(\frac{39}{70}\right)$$

4.2

Put a ☐ around the mixed fractions above.

A pure decimal fraction is a decimal number with no whole number part.

.74 is a pure decimal fraction.

A mixed decimal fraction is a decimal number with a whole number part.

2.74 is a mixed decimal fraction.

Circle the pure decimal fractions below.

$$\boxed{7.34}$$

$$\frac{2}{3}$$

$$\left(.93\right)$$

$$7\frac{1}{10}$$

$$\left(.86\right)$$

$$\boxed{2.9}$$

Put a ☐ around the mixed decimal fractions above.

For extra practice, do Page 10.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	7	1

.001 is read one thousandth.

One thousandth is 1 of 1000 equal parts.

1 of 1000 equal parts written as a fraction is $\frac{1}{1000}$.

$$.001 = \frac{1}{1000}$$

Write a common fraction which equals each pure decimal fraction below.

$$.001 = \frac{1}{1000}$$

$$.008 = \frac{8}{1000}$$

$$.006 = \frac{6}{1000}$$

$$.009 = \frac{9}{1000}$$

$$.049 = \frac{49}{1000}$$

$$.010 = \frac{10}{1000}$$

$$.127 = \frac{127}{1000}$$

$$.020 = \frac{20}{1000}$$

$$.693 = \frac{693}{1000}$$

$$.099 = \frac{99}{1000}$$

$$.070 = \frac{70}{1000}$$

$$.100 = \frac{100}{1000}$$

$$.003 = \frac{3}{1000}$$

$$.487 = \frac{487}{1000}$$

$$.561 = \frac{561}{1000}$$

$$.620 = \frac{620}{1000}$$

TOTAL POINTS	NUMBER CORRECT
17	

LEVEL	UNIT	SKILL	PAGE
E	01	7	2

When you write a decimal fraction as a common fraction, the place value of the last digit on the right of the decimal number tells you if the fraction is tenths, hundredths, or thousandths.

.21 the last digit is in the hundredths place
so $.21 = \frac{21}{100}$

.7 the last digit is in the tenths place
so $.7 = \frac{7}{10}$

.657 the last digit is in the thousandths place
so $.657 = \frac{657}{1000}$

.002 the last digit is in the thousandths place
so $.002 = \frac{2}{1000}$

.04 the last digit is in the hundredths place
so $.04 = \frac{4}{100}$

.060 the last digit is in the thousandths place
so $.060 = \frac{60}{1000}$

.471 the last digit is in the thousandths place
so $.471 = \frac{471}{1000}$

For extra practice, do Page 11.

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	7	3

When you write a decimal number as a mixed fraction you first write the whole number part then the fraction part. The last digit of the decimal fraction tells whether the fraction is tenths, hundredths, or thousandths.

In these problems circle the whole number part, say the place value of the last digit to yourself, then write each number as a mixed fraction.

$$(56).04 = \underline{56} \frac{4}{100}$$

$$(25).005 = \underline{25} \frac{5}{1000}$$

$$(56).7 = \underline{56} \frac{7}{10}$$

$$(6).025 = \underline{6} \frac{25}{1000}$$

$$(100).635 = \underline{100} \frac{635}{1000}$$

$$(94).94 = \underline{94} \frac{94}{100}$$

$$(26).9 = \underline{26} \frac{9}{10}$$

$$(7).125 = \underline{7} \frac{125}{1000}$$

$$(65).93 = \underline{65} \frac{93}{100}$$

For extra practice, do Page 12.

TOTAL POINTS	NUMBER CORRECT
18	

LEVEL	UNIT	SKILL	PAGE
E	01	7	4

Write these decimal numbers as common or mixed fractions. Remember that the place value of the last digit tells you if the fraction is tenths, hundredths, or thousandths.

$$.06 = \frac{6}{100}$$

$$6.75 = 6\frac{75}{100}$$

$$2.75 = 2\frac{75}{100}$$

$$.007 = \frac{7}{1000}$$

$$75.1 = 75\frac{1}{10}$$

$$75.63 = 75\frac{63}{100}$$

$$24.064 = 24\frac{64}{1000}$$

$$49.73 = 49\frac{73}{100}$$

$$100.621 = 100\frac{621}{1000}$$

$$56.792 = 56\frac{792}{1000}$$

$$25.7 = 25\frac{7}{10}$$

$$.671 = \frac{671}{1000}$$

$$38.65 = 38\frac{65}{100}$$

$$9.76 = 9\frac{76}{100}$$

$$.9 = \frac{9}{10}$$

$$76.142 = 76\frac{142}{1000}$$

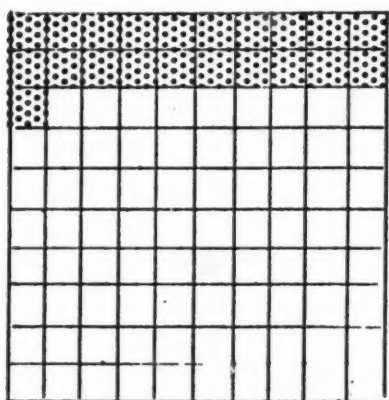
For extra practice, do Page 13.

TOTAL POINTS	NUMBER CORRECT
16	

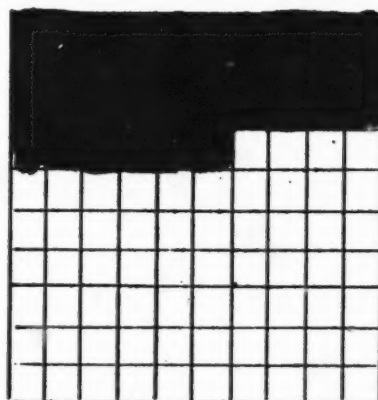
LEVEL	UNIT	SKILL	PAGE
E	01	7	5

Each box below is divided into 100 equal parts. Shade each box to show the meaning of the decimal numeral in front of it.

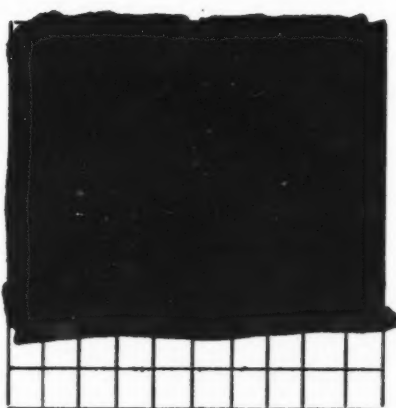
.21



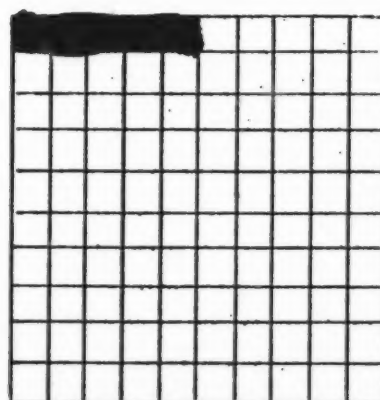
.36



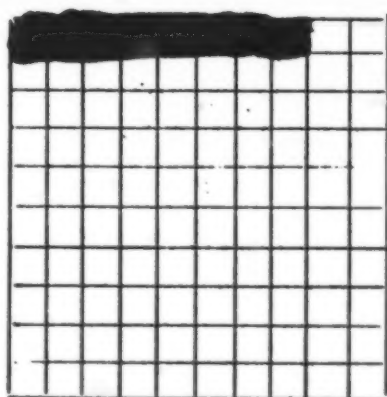
.80



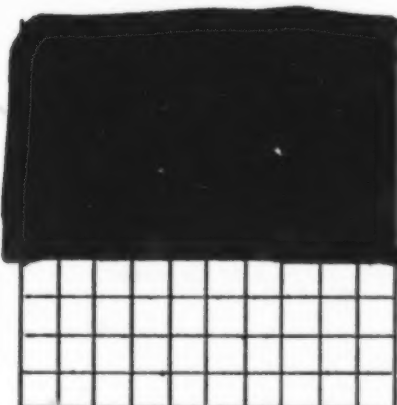
.05



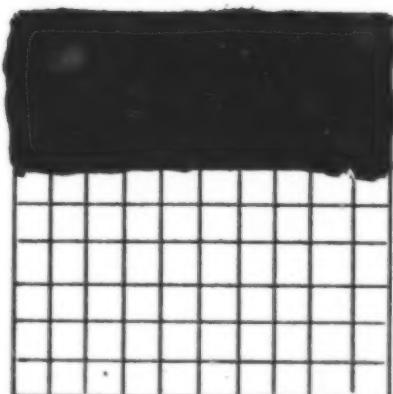
.08



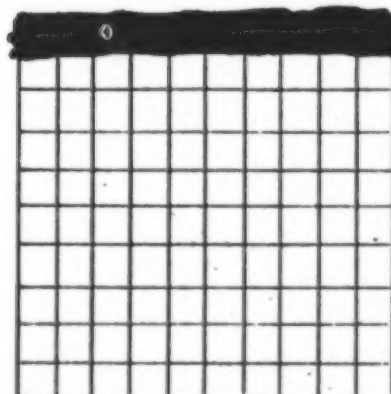
.60



.4



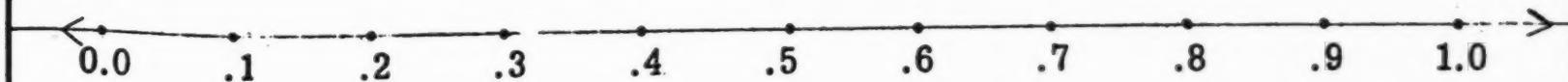
.1



TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
E	01	7	6

This number line shows decimal numbers between 0 and 1. It is divided into tenths.

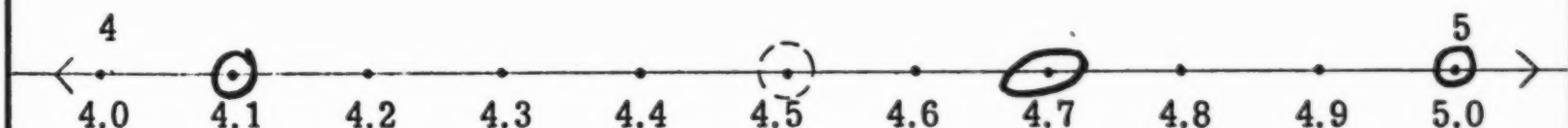


In each blank, write the number of tenths that comes just before the given number.

.3 .4
.8 .9

.5 .6
.1 .2

This number line shows decimal numbers between 4 and 5. It is divided into tenths.



Find the following numbers on the number line. Circle the points on the number line labeled by these numbers.

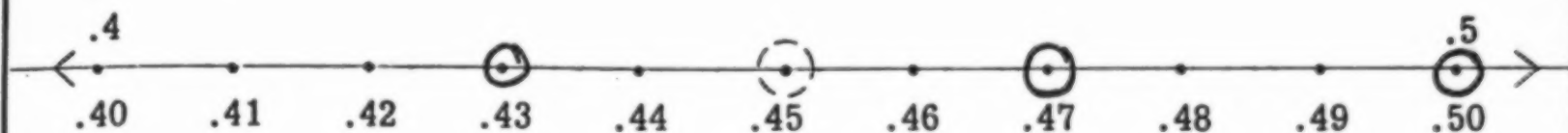
4.5

4.7

5.0

4.1

This number line shows decimal numbers between .4 and .5. It is divided into hundredths.



Circle the points on the number line labeled by these numbers.

.45

.47

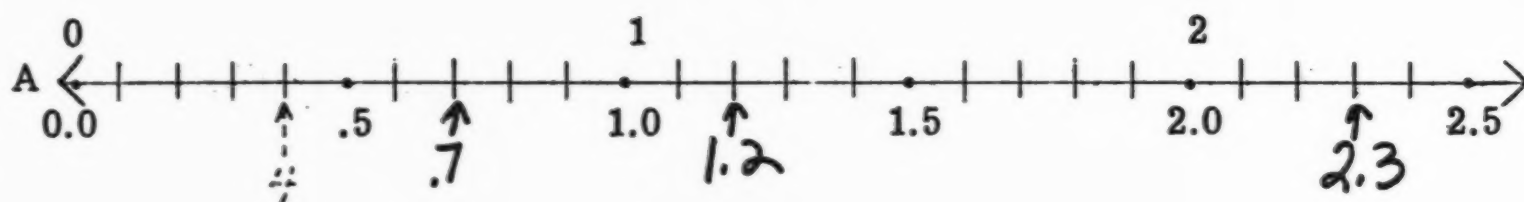
.50

.43

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	7	7

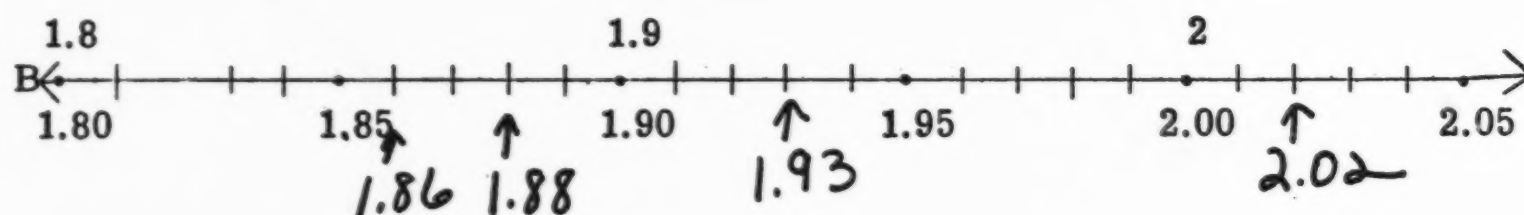
Number line A goes from 0 to 2.5. It is divided into tenths.



Find and label these points on Number line A.

.4 .7 1.2 2.3

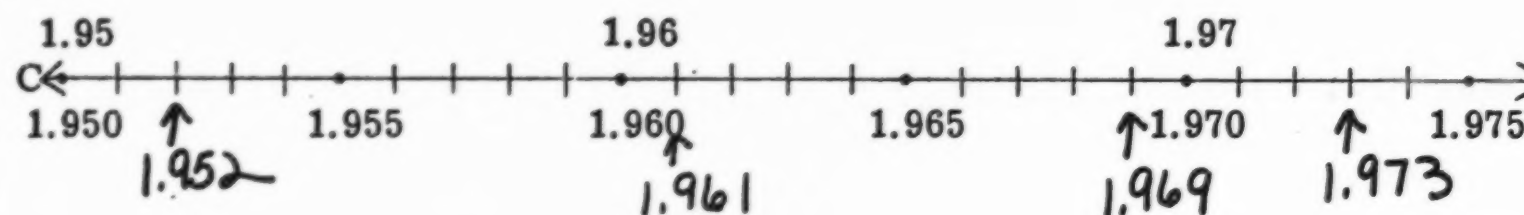
Number line B goes from 1.80 to 2.05. It is divided into hundredths.



Find and label these points on Number line B.

1.86 1.88 1.93 2.02

Number line C goes from 1.950 to 1.975. It is divided into thousandths.



Find and label these points on Number line C.

1.969 1.952 1.973 1.961

For extra practice, do Page 14.

TOTAL POINTS	NUMBER CORRECT
12	

LEVEL	UNIT	SKILL	PAGE
E	01	7	8

CET I

Write the answer to each problem in the blank.

Write 2.071 as a mixed fraction. _____

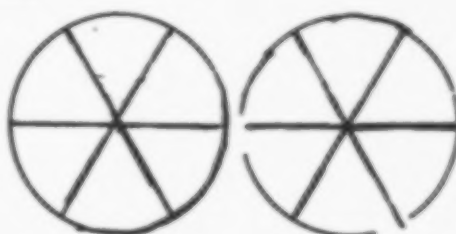
Write 1.9 as a fraction. _____

Write 1.9 in words. _____

Write 3.971 in words. _____

Write .001 as a fraction. _____

Shade the circles to show 1.5.



C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

Write each set of numbers in order from largest to smallest.

3.47 3.07 3.74 — _____

26.01 10.26 62.10 — _____

.001 .010 .100 — _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	3	100%
	NO. OF PTS.	%
	2	67
	1	33

LEVEL	UNIT	SKILL	PAGE
E	01	7	9

A common fraction is a fraction with no whole number part.

$\frac{1}{2}$ is a common fraction

A mixed fraction is a numeral with a whole number part and a fraction part.

$4\frac{3}{4}$ is a mixed fraction

A pure decimal fraction is a decimal number with no whole number part.

.06 is a pure decimal fraction

A mixed decimal fraction is a decimal number with a whole number part.

7.8 is a mixed decimal fraction

4.59

$\frac{2}{5}$

$6\frac{1}{2}$

.4

Write the number above which is a common fraction. $\frac{2}{5}$

Which number is a pure decimal fraction? .4

Which number is a mixed decimal fraction? 4.59

Which number is a mixed fraction? $6\frac{1}{2}$

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	7	10

Fill the place value chart, write the place value of the last digit of each decimal fraction, then write a common fraction which equals the decimal fraction.

	tenths	hundredths	thousandths	
.73	<u>7</u>	<u>3</u>	<u> </u>	The last digit is in the <u>hundredths</u> place. $.73 = \frac{73}{100}$
.4	<u>4</u>			The last digit is in the <u>tenths</u> place. $.4 = \frac{4}{10}$
.625	<u>6</u>	<u>2</u>	<u>5</u>	The last digit is in the <u>thousandths</u> place. $.625 = \frac{625}{1000}$
.008	<u>0</u>	<u>0</u>	<u>8</u>	The last digit is in the <u>thousandths</u> place. $.008 = \frac{8}{1000}$
.06	<u>0</u>	<u>6</u>		The last digit is in the <u>hundredths</u> place. $.06 = \frac{6}{100}$

TOTAL POINTS	NUMBER CORRECT
15	

LEVEL	UNIT	SKILL	PAGE
E	01	7	11

9.21

What is the whole number part of 9.21? 9What is the pure decimal fraction part of 9.21? .21Write .21 as a common fraction. $\frac{21}{100}$ To write 9.21 as a mixed fraction first write the whole number part and then write the common fraction part.

$$9.21 = 9\frac{21}{100}$$

20.674

What is the whole number part of 20.674? 20What is the pure decimal fraction part of 20.674? .674Write .674 as a common fraction. $\frac{674}{1000}$

$$20.674 = 20\frac{674}{1000}$$

47.3

What is the whole number part of 47.3? 47What is the pure decimal fraction part of 47.3? .3Write .3 as a common fraction. $\frac{3}{10}$

$$47.3 = 47\frac{3}{10}$$

Write the following as mixed fractions.

$$3.41 = 3\frac{41}{100}$$

$$82.074 = 82\frac{74}{1000}$$

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	7	12

Circle the common or mixed fraction that means the same as the decimal fraction. Remember that the decimal point separates the whole number part from the fraction part.

.08

$$\frac{8}{10}$$

$$\frac{8}{100}$$

$$\frac{8}{1000}$$

2.7

$$2\frac{7}{10}$$

$$2\frac{7}{100}$$

$$2\frac{7}{1000}$$

20.475

$$20\frac{475}{1000}$$

$$2\frac{475}{1000}$$

$$24\frac{75}{100}$$

6.03

$$6\frac{3}{100}$$

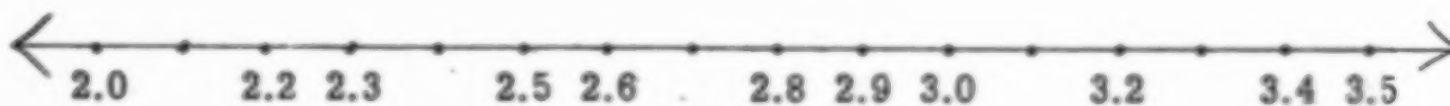
$$6\frac{3}{1000}$$

$$6\frac{3}{10}$$

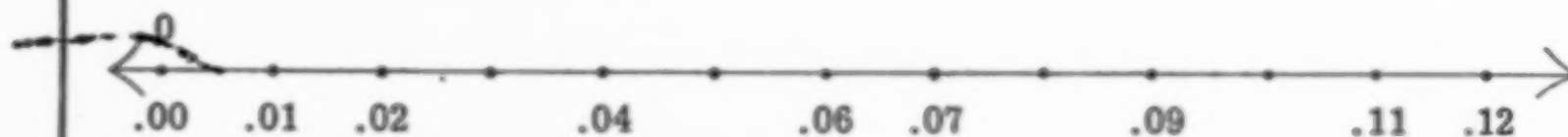
TOTAL POINTS	NUMBER CORRECT
4	

LEVEL	UNIT	SKILL	PAGE
E	01	7	13

This number line shows decimal numbers between 2.0 and 3.5. It is divided into tenths. Write the missing numbers on the blanks below this number line.

2.12.42.73.13.3

This number line shows decimal numbers between 0 and .12. It is divided into hundredths. Write the missing numbers on the blanks below this number line.

.03.05.08.10

This number line shows decimals between .060 and .072. It is divided into thousandths. Write the missing numbers on the blanks below this number line.

.062.064.066.069.071

TOTAL POINTS	NUMBER CORRECT
14	

LEVEL	UNIT	SKILL	PAGE
E	01	7	14

CET II

Write the answer to each problem in the blank.

Write 3.415 as a mixed fraction. _____

Write 1.8 as a mixed fraction. _____

Write 4.205 in words. _____

Write .006 as a fraction. _____

Write 24.32 in words. _____

Shade the boxes to show 1.6.

C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

Write each set of numbers in order from smallest to largest.

3.05 2.05 5.03 — _____

9.62 9.12 9.96 — _____

4.05 3.15 4.16 — _____

C I R C L E C O R R E C T B O X	TL. PTS.	
	3	100%
	NO. OF PTS.	%
	2	67
	1	33

LEVEL	UNIT	SKILL	PAGE
E	01	7	15

OBJECTIVE: Converts mixed decimal fractions to thousandths and various other forms. For example, pictures; common or mixed fractions; position on number line. Limit of whole numbers to 100.

STANDARD TEACHING SEQUENCE

Page	Supplementary Material
1. Identifies common fractions, mixed fractions, pure decimal fractions, and mixed decimal fractions.	10
2. Writes common fractions for pure decimal fractions.	
3. Writes place value of last digit of pure decimal fractions, then writes common fraction for given pure decimal fractions, then writes common fraction for given pure decimal fraction.	11
4. Circles whole number part of mixed decimal fraction; writes mixed fraction equivalent.	12
5. Writes common or mixed fraction equal to given pure or mixed decimal fraction.	
6. Shades area of hundreds square to correspond with given pure decimal fraction.	
7. Locates and labels pure and mixed decimal fractions on number line.	
8. Locates and labels pure and mixed decimal fractions on number line.	14
9. CET I.	
CET II.	15

Circle pages that are to be done.

SCHOOL CODE

NAME _____

NUMBER _____ CLASS _____



mathematics curriculum staff

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL E

NUMERATION (01)

SKILL 8

Based upon materials developed by The Mathematics Curriculum Staff,
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Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

TO THE STUDENT

Put these numbers in order from smallest to largest.

5.751

5.093

5.749

—

—

—

Answers

5.093

5.749

5.751

You can use number lines to help decide if one decimal fraction is greater or less than another decimal fraction.

Here is a number line divided into tenths.



.4 is less than ($<$) .5 because $\frac{4}{10}$ is $<$ $\frac{5}{10}$. Use the number line to help you see which decimal fractions are larger or smaller.

Using the number line above, put $>$ or $<$ in the circle provided to make a true statement.

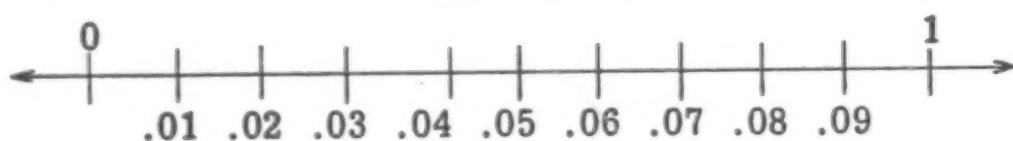
.8 .4

.2 .6

.7 .9

1.0 .9

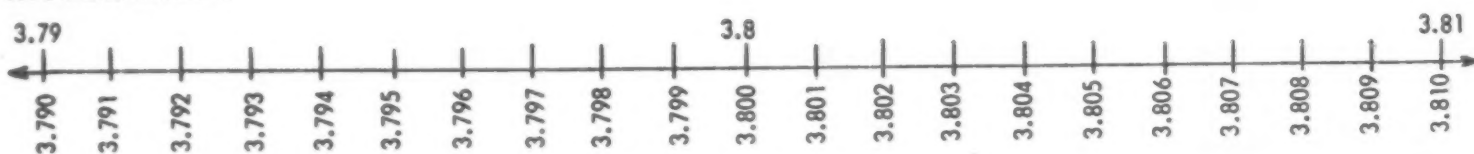
Here is a number line divided into hundredths.



Is .02 $<$ or $>$.06? .06 is greater than .02 because $\frac{6}{100}$ is greater than $\frac{2}{100}$.

You can use a number line to help you figure out which decimal fraction is larger or smaller.

This number line shows decimals between 3.79 and 3.81. It is divided into thousandths.



Using the number line above, put $>$ or $<$ in the circles to make a true statement.

3.796 3.797

3.797 3.805

3.804 3.800

3.808 3.804

3.804 3.8

3.81 3.809

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
E	01	8	1

Compare .8 and .09. Which is larger?

Here is how to compare each number.

$$8 = \frac{8}{10} \quad \text{and} \quad .09 = \frac{9}{100}$$

$$\frac{8}{10} \frac{(8 \times 10)}{(10 \times 10)} = \frac{80}{100} \quad (\text{another name for } \frac{8}{10})$$

$$\frac{80}{100} > \frac{9}{100} \quad \text{so:} \quad .8 \quad \bigcirc \quad .09$$

Fill in the circles with > or <.

$$.07 \quad \bigcirc \quad .1$$

$$\text{Think, } .07 = \frac{7}{100}$$

$$.1 = \frac{1}{10}$$

$$\text{but } \frac{1}{10} = \frac{10}{100} \quad \text{so } \frac{7}{100} < \frac{10}{100} \quad \text{and } .07 < .1$$

$$.08 \quad \bigcirc \quad .8$$

$$.04 \quad \bigcirc \quad .4$$

$$.07 \quad \bigcirc \quad .7$$

$$.03 \quad \bigcirc \quad .3$$

$$.06 \quad \bigcirc \quad .6$$

$$.02 \quad \bigcirc \quad .2$$

$$.05 \quad \bigcirc \quad .5$$

$$.01 \quad \bigcirc \quad .1$$

For extra practice, do Page 13.

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
E	01	8	2

Put $>$ or $<$ in the circle.

$$91.77 \quad \bigcirc \quad 90.84$$

To compare mixed decimal fractions, first look at the whole numbers. If they are different, they are easily compared.

For example, $8.06 \quad ? \quad 6.16$

If the whole numbers are the same you must look at the fractional part of the number and compare them as you learned.

For example, $8.06 \quad ? \quad 8.16$

same whole
number

different fractional
part

The decimal part can then be written as a fraction

$$.06 \quad ? \quad .16 \text{ is } \frac{6}{100} \quad ? \quad \frac{16}{100}$$

Fill in the circles with $>$ or $<$.

$$\begin{array}{ccc} 14.03 & \bigcirc & 15.3 \\ 4.31 & \bigcirc & 4.36 \\ 25.053 & \bigcirc & 26.055 \\ 19.09 & \bigcirc & 19.9 \\ 21.302 & \bigcirc & 22.301 \\ 18.400 & \bigcirc & 18.401 \end{array}$$

TOTAL POINTS	NUMBER CORRECT
7	

LEVEL	UNIT	SKILL	PAGE
E	01	8	3 333

Put $>$ or $<$ in the circles to make the statement true.

$6.40 \quad \textcircled{<} \quad 6.50$

$6.41 \quad \textcircled{<} \quad 6.50$

$6.42 \quad \textcircled{<} \quad 6.50$

$10.42 \quad \textcircled{>} \quad 10.32$

$10.42 \quad \textcircled{>} \quad 10.33$

$10.42 \quad \textcircled{>} \quad 10.34$

$7.30 \quad \textcircled{>} \quad 7.20$

$7.30 \quad \textcircled{>} \quad 7.21$

$7.30 \quad \textcircled{>} \quad 7.22$

$11.83 \quad \textcircled{<} \quad 11.90$

$11.84 \quad \textcircled{<} \quad 11.90$

$11.85 \quad \textcircled{<} \quad 11.90$

$8.55 \quad \textcircled{<} \quad 8.65$

$8.56 \quad \textcircled{<} \quad 8.65$

$8.57 \quad \textcircled{<} \quad 8.65$

$15.10 \quad \textcircled{<} \quad 15.20$

$15.11 \quad \textcircled{<} \quad 15.21$

$15.12 \quad \textcircled{<} \quad 15.22$

TOTAL POINTS	NUMBER CORRECT
18	

LEVEL	UNIT	SKILL	PAGE
E	01	8	4

Put $>$ or $<$ in the circles to make the statement true.

$4.390 \text{ } \textcircled{<} \text{ } 4.40$

$4.391 \text{ } \textcircled{<} \text{ } 4.40$

$4.392 \text{ } \textcircled{<} \text{ } 4.40$

$19.059 \text{ } \textcircled{\phantom{<}} \text{ } 19.1$

$19.060 \text{ } \textcircled{\phantom{<}} \text{ } 19.1$

$19.061 \text{ } \textcircled{\phantom{<}} \text{ } 19.1$

$6.900 \text{ } \textcircled{\phantom{<}} \text{ } 6.897$

$6.900 \text{ } \textcircled{\phantom{<}} \text{ } 6.898$

$6.900 \text{ } \textcircled{\phantom{<}} \text{ } 6.899$

$47.30 \text{ } \textcircled{\phantom{<}} \text{ } 47.310$

$47.30 \text{ } \textcircled{\phantom{<}} \text{ } 47.311$

$47.30 \text{ } \textcircled{\phantom{<}} \text{ } 47.312$

$10.441 \text{ } \textcircled{\phantom{<}} \text{ } 10.451$

$10.442 \text{ } \textcircled{\phantom{<}} \text{ } 10.452$

$10.443 \text{ } \textcircled{\phantom{<}} \text{ } 10.450$

$9.702 \text{ } \textcircled{\phantom{<}} \text{ } 9.71$

$9.703 \text{ } \textcircled{\phantom{<}} \text{ } 9.72$

$9.704 \text{ } \textcircled{\phantom{<}} \text{ } 9.73$

$20.354 \text{ } \textcircled{\phantom{<}} \text{ } 20.345$

$20.354 \text{ } \textcircled{\phantom{<}} \text{ } 20.346$

$20.354 \text{ } \textcircled{\phantom{<}} \text{ } 20.347$

TOTAL POINTS	NUMBER CORRECT
21	

LEVEL	UNIT	SKILL	PAGE
E	01	8	5

Put a $>$ or $<$ in the circles. Remember, look at the whole numbers first.

$$41.35 \quad \bigcirc \quad 40.32$$

$$65.011 \quad \bigcirc \quad 64.077$$

$$71.253 \quad \bigcirc \quad 71.252$$

$$76.509 \quad \bigcirc \quad 76.409$$

$$33.21 \quad \bigcirc \quad 33.20$$

$$42.830 \quad \bigcirc \quad 42.829$$

$$55.505 \quad \bigcirc \quad 55.055$$

$$81.011 \quad \bigcirc \quad 81.003$$

$$12.5 \quad \bigcirc \quad 12.05$$

$$16.339 \quad \bigcirc \quad 15.339$$

TOTAL POINTS	NUMBER CORRECT
10	

LEVEL	UNIT	SKILL	PAGE
E	01	8	6

Circle the largest number in each set.

.84

.90

.79

4.5

4.8

4.0

27.3

20.3

23.7

18.09

18.003

18.1

16.552

16.553

16.6

9.01

9.225

9.31

.735

.829

.80

.731

.733

.740

For extra practice, do Page 14.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	8	7

Circle the smallest number in each set.

.31

.25

(.244)

.09

.112

.13

7.116

7.109

7.305

2.9

3.1

3.2

4.773

4.709

4.777

6.309

6.311

6.302

.41

.016

.553

2.53

.978

1.327

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	8	8

Put each set of numbers in order from smallest to largest.

.853 .850 .859 .33 .4 .41

.250 .850 .859 .33 .4 .41

.117 .017 .113 9.116 9.6 .96

.017 .113 .117 .96 9.116 9.6

8.5 8.05 8.005 .443 .405 .550

8.005 8.05 8.5 .405 .443 .550

.731 .730 .733 .2 .015 .013

.013 .015 .2 .730 .731 .733

For extra practice, do Page 15.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	8	9

Put each set of numerals in order from smallest to largest.

6.521 6.520 6.527 6.538 6.529 6.413

6.520 6.521 6.527 6.413 6.529 6.538

7.205 7.211 7.220 9.340 9.339 9.341

7.205 7.211 7.220 9.339 9.340 9.341

2.159 2.16 2.2 7.355 7.354 7.45

2.159 2.16 2.2 7.354 7.355 7.45

8.109 8.112 8.101 1.035 1.036 1.1

8.101 8.109 8.112 1.035 1.036 1.1

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	8	10

Put each set of numbers in order from largest to smallest.

.351

.355

.309

.075

.125

.331

.355~~.351~~~~.309~~~~.331~~~~.125~~~~.075~~

7.36

7.37

7.32

7.059

7.061

7.06

7.377.367.32~~7.061~~~~7.06~~~~7.059~~

12.5

12.09

12.12

.001

.111

.1

~~12.5~~~~12.12~~~~12.09~~~~.111~~~~.1~~~~.001~~

80.3

81.3

80.31

.446

.406

.464

~~81.3~~~~80.31~~~~80.3~~~~.464~~~~.446~~~~.406~~

For extra practice, to Page 16.

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	8	11

CET I

Write each set of numbers in order from smallest to largest.

.134

.738

.205

25.326

21.593

35.111

3.514

3.145

3.415

9.72

9.32

9.12

6.48

5.19

5.48

.236

.326

.623

C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	
	5	83
	4	67
	3	50
	2	33
	1	17

LEVEL	UNIT	SKILL	PAGE
E	01	8	12

Put $>$ or $<$ in the circles.

Why is .09 smaller than .9? To find out, rename them as fractions.

$$.09 = \frac{9}{100} \text{ and } .9 = \frac{9}{10} = \frac{(9 \times 10)}{10 \times 10} = \frac{90}{100}$$

Then $\frac{9}{100} < \frac{90}{100}$ or $.09 < .9$

$$.11 \quad \left(\begin{array}{c} > \\ \hline \end{array} \right) \quad .10$$

$$\left(\frac{11}{100} \right) \quad \left(\frac{10}{100} \right)$$

$$.76 \quad \left(\begin{array}{c} < \\ \hline \end{array} \right) \quad .80$$

$$.76 \quad \left(\begin{array}{c} > \\ \hline \end{array} \right) \quad .75$$

$$.2 \quad \left(\begin{array}{c} > \\ \hline \end{array} \right) \quad .02$$

$$.09 \quad \left(\begin{array}{c} > \\ \hline \end{array} \right) \quad .08$$

$$.07 \quad \left(\begin{array}{c} > \\ \hline \end{array} \right) \quad .04$$

$$.30 \quad \left(\begin{array}{c} > \\ \hline \end{array} \right) \quad .29$$

$$.50 \quad \left(\begin{array}{c} < \\ \hline \end{array} \right) \quad .60$$

$$.17 \quad \left(\begin{array}{c} < \\ \hline \end{array} \right) \quad .18$$

$$.43 \quad \left(\begin{array}{c} < \\ \hline \end{array} \right) \quad .44$$

$$.13 \quad \left(\begin{array}{c} < \\ \hline \end{array} \right) \quad .15$$

$$.61 \quad \left(\begin{array}{c} > \\ \hline \end{array} \right) \quad .60$$

$$.15 \quad \left(\begin{array}{c} < \\ \hline \end{array} \right) \quad .17$$

TOTAL POINTS	NUMBER CORRECT
13	

LEVEL	UNIT	SKILL	PAGE
E	01	8	13

Circle the largest number in each set.

.253 1.785
 .775 (1.0) 1.800
 1.729

29.05 3.57
 29.005 (29.50) .357
 357.0

.079 (.735) .541
 .113 .451
 .154

2.55 76.35
 2.50 76.351
 (2.6) 76.352

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	8	14

Put each set of numbers in order from smallest to largest.

.537

.573

.533

.1

.5

.40

.533.537.573.1.5.40

2.91

2.11

2.90

.35

.47

.21

2.112.402.91.21.35.47

7.065

7.06

7.05

7.5

4.09

2.3

7.057.067.0652.34.097.5

2.111

2.115

2.12

1.76

1.77

1.768

2.1112.1152.121.761.7681.77

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	8	15

Put each set of numbers in order from largest to smallest.

.076

1.2

1.53

.209

.201

.2

1.531.2.076.209.201.2

7.531

7.315

7.153

5.50

5.51

5.52

7.5317.3157.1535.505.515.52

2.051

2.11

2.06

76.819

76.81

76.811

2.062.112.05176.81976.8176.811

.573

.574

.58

.597

.599

.598

TOTAL POINTS	NUMBER CORRECT
8	

LEVEL	UNIT	SKILL	PAGE
E	01	8	16

CET II

Write each set of numbers in order from smallest to largest.

.026

.206

.620

3.471

4.731

1.374

2.212

2.122

2.221

60.003

6.003

60.030

8.320

8.032

8.230

.473

.743

.374

C I R C L E C O R R E C T B O X	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

LEVEL	UNIT	SKILL	PAGE
E	01	8	17

OBJECTIVE: Orders a collection of pure and mixed decimal fractions. Decimal part to thousandths. Whole numbers to 100.

STANDARD TEACHING SEQUENCE

Page	Supplementary Material
1. Puts > or < between mixed and pure decimals to show relationship; uses number line.	
2. Puts > or < between two-digit pure decimals.	13
3. Puts > or < between mixed decimals.	
4. Puts > or < between mixed decimals.	
5. Puts > or < between mixed decimals.	
6. Puts > or < between mixed decimals.	
7. Circles largest number in set of three.	14
8. Circles smallest number in set of three.	
9. Rewrites sets of three decimals in order from smallest to largest.	15
10. Rewrites sets of three decimals in order from smallest to largest.	
11. Rewrites sets of three decimals in order from the largest to the smallest.	16
12. CET I.	
CET II.	17

Circle pages that are to be done.

This is the Posttest which has been completed by Eileen and corrected by the Aide.

Analyze the Posttest results and make a decision about Eileen's mastery of this unit.

Complete the record of Eileen's work in the E-Num. unit by entering the required information on the first Prescription Sheet.

SCHOOL CODE

NAME

Eileen O'Brien

NUMBER

9999

CLASS

5

Km. 8



individuality prescribed instruction

MATHEMATICS

Post-Test

LEVEL E

NUMERATION (01)

Developed by The Testing and Evaluation Staff, Learning Research and Development Center, University of Pittsburgh; Richard Cox, Ph.D., Director

TOTAL PTS. $\frac{47}{52}$

90 %

Appleton-Century-Crofts



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DEVELOPMENTAL EDITION

E NUMERATION (01) POST-TEST

SKILL 1

Directions: Fill in the blanks in each row, counting forward by 1's.

C I R C L E C O R R E C T B O X	T I M E P T S	
	5	100%
	NO. OF PTS.	%
	4	80
	3	60
	2	40
	1	20

86,978

86,979 , 86,980 , 86,981

400,083

400,084 , 400,085 , 400,086

16,999

17,000 , 17,001 , 17,002

982,435

982,436 , 982,437 , 982,438

999,997

999,998 , 999,999 , 1,000,000

E NUMERATION (01) POST-TEST

SKILL 2

Directions: Circle all of the even numbers.

178

999

1,001

42

583

776

Directions: Put an X on the word that is the correct ending for each sentence.

The sum of two odd numbers is . . .

~~even~~

odd

The difference between two odd numbers is . . .

~~even~~

odd

The product of two odd numbers is . . .

even

~~odd~~

The product of an odd and an even number

~~even~~

odd

C I C C L E C O R R E C T B O X	TL. PTS	
	PTS.	%
	5	100%
	4	80
	3	60
	2	40
	1	20

Directions: Round each of the numbers to the nearest hundred.

499 500

620 600

30,093 30,000 X

42,651 42,700

C I R C L E C O R R E C T B O X	TL. PTS.	
	8	100%
	NO. OF PTS.	
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13

Directions: Estimate the answers to the problems below by first rounding the numbers to the nearest ten and then adding or subtracting. Circle the correct estimated answer.

How much does 34 yards plus 42 yards equal?

75 yards 80 yards 60 yards 70 yards

Jane lost 26 of her 47 paper clips. How many paper clips did Jane have left?

20 30 60 80 X

Tom had 19 cookies and ate eight. How many cookies did he have left?

16 10 30 0

621 plus 1,368?

1,990 2,010 1,980 1,000

Directions: Write the standard numerals for the following number words..

six hundred seventy-three

673

five thousand eleven

5,011

one thousand seven hundred twenty-nine

1,729

four thousand three

4,003

C I C L E	TL. PTS.	
	NO. OF PTS.	%
C O R R E C T B O X	8	100%
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13

Directions: Write the following numbers in words.

341 three hundred forty-one

5,006 five thousand six

4,612 four thousand six hundred twelve

8,502 eight thousand five hundred two

Directions: Write the equivalent decimal fraction for each of these fractions.

$$\frac{6}{10} = \underline{.6}$$

$$4\frac{8}{10} = \underline{4.8}$$

$$92\frac{7}{100} = \underline{92.07}$$

$$432\frac{61}{100} = \underline{432.61}$$

Directions: Write the equivalent fraction for each of these decimal fractions.

$$.8 = \underline{\frac{8}{10}}$$

$$.79 = \underline{\frac{79}{100}}$$

$$63.1 = \underline{63\frac{1}{10}}$$

$$96.04 = \underline{96\frac{4}{100}}$$

C I R C L E	TL. PTS.	
	NO. OF PTS.	%
C O R R E C T	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13
B O X		

Directions: Write the decimal fraction for the number words.

three and forty-six hundredths

3.46

nine and two hundredths

9.002 X

five and six hundred five thousandths

5.605

C I R C L E C O R R E C T B O X	TL. PTS.	
	5	100%
	NO. OF PTS.	
	4	80
	3	60
	2	40
	1	20

Directions: Write these decimal fractions in number words.

7.623

seven and six hundred twenty three thousandths

4.85

four and eighty-five hundredths

Directions: Write these decimal numbers as mixed fractions.

$$5.47 \quad \underline{5 \frac{47}{100}}$$

$$32.891 \quad \underline{32 \frac{891}{1000}}$$

$$87.03 \quad \underline{87 \frac{3}{100}}$$

C I R C L E C O R R E C T B O X	TL. PTS.	
	8	100%
	NO. OF PTS.	
	7	87.5%
	6	75%
	5	63%
	4	50%
	3	38%
	2	25%
	1	13%

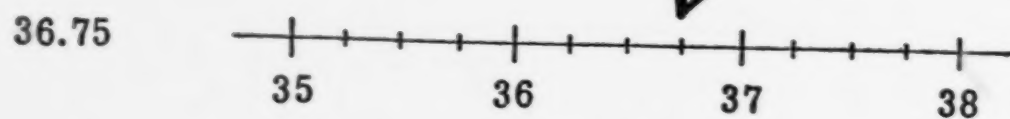
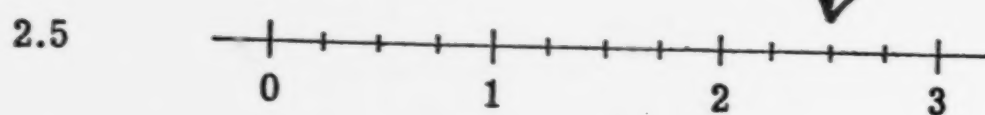
Directions: Write these decimal numbers as common fractions.

$$7.3 \quad \underline{\frac{73}{10}}$$

$$6.145 \quad \underline{\frac{6145}{10000}} \quad \times$$

$$9.27 \quad \underline{\frac{927}{100}}$$

Directions: Draw an arrow to show the location on the number line of each decimal number.



Directions: Write each row of numbers in order from the smallest to the largest.

TL. PTS.	
5	100%
NO. OF PTS.	
4	80
3	60
2	40
1	20

	smallest	largest
6.09 6.90 0.69	0.69	6.09 6.90

	smallest	largest
.82 .082 8.2	.082	.82 8.2

	smallest	largest
47.5 4.75 4.07	4.07	4.75 47.5

	smallest	largest
1.330 13.30 .133	.133	1.330 13.30

	smallest	largest
.957 95.7 9.57	.957	9.57 95.7

MATHEMATICS PRESCRIPTION SHEET

PAGE: OF

SCHOOL STAMP
U. S. 2-3

STUDENT NAME

STUDENT NUMBER

U. S.

GRADE

ROOM

U. S.

UNIT

U. S.

UNIT DATES

UNIT BEGAN	U. 13-16
UNIT ENDED	U. 17-20
DAYS WORKED* U. 21-22	

SCHOOL CALENDAR

BEGAN	U. 23-25
ENDED	U. 26-28
Worked 	

SKILL BOOKLETS							CURRICULUM TEST				SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
DATE PRES.	PRES. INIT.	SKILL NO.	PAGE NO.	INST. TECH CODES	SCORE	MAX. POINTS	PART 1		PART 2				
S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71	////	////	SCORE	% S. 72-73	SCORE	% S. 74-75			
1													
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9													
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14													
15													
16													
17													
18													

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW
U. & S. 79

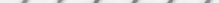
EYPUNCH SAMPLE
 L PRE % POST %
 -31 U. 32-33 U. 34-35 TO 78
 80 95

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

PAGE: OF

SCHOOL STAMP	U. S. 2-3

STUDENT
NAME

STUDENT
NUMBER

U. S.	4	5	6	7
-------	---	---	---	---

GRADE		ROOM
U. S.	9	

UNIT			
U. S.	10	11	12

UNIT DATES	
UNIT BEGAN	U. 13-16
UNIT ENDED	U. 17-20
DAYS WORKED*	U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		/ / / / /

[illegible]

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
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07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW
U. & S. 79

[illegible]

MATHEMATICS PRESCRIPTION SHEET

PAGE: OF

SCHOOL STAMP U. S. 2-3

STUDENT NAME

STUDENT NUMBER U. S. 4 5 6 7

GRADE U. S. 9 ROOM

UNIT U. S. 10 11 12

UNIT DATES
UNIT BEGAN U. 13-16
UNIT ENDED U. 17-20
DAYS WORKED* U. 21-22

SCHOOL CALENDAR
BEGAN U. 23-25
ENDED U. 26-28
Worked

	SKILL BOOKLETS							CURRICULUM TEST				SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
	DATE	PRES.	SKILL	PAGE	INST.	SCORE	MAX. POINTS	PART 1		PART 2				
	→	→	→	↓	↓			SCORE	%	SCORE	%			
	PRES.	INIT.	NO.	NO.	TECH CODES			S. 72-73	S. 74-75					
	S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71	////	////	SCORE	S. 72-73	SCORE	S. 74-75	////	S. 76-77	
1														
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CODES	INSTRUCTIONAL TECHNIQUE
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12	OTHERS

OVERFLOW
U. & S. 79

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	% ▼	POST	% ▼	POST	% ▼	POST	% ▼
X									
X									
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X									
X									
X									
X									
X									
X									

MATHEMATICS PRESCRIPTION SHEET

PAGE: OF

SCHOOL STAMP

U. S. 2-3

STUDENT
NAME

STUDENT
NUMBER

U. S.	4	5	6	7
-------	---	---	---	---

GRADE

U. S.	9
-------	---

ROOM

UNIT

U. S.	10	11	12
-------	----	----	----

UNIT DATES			
UNIT BEGAN		U. 13-16	
UNIT ENDED		U. 17-20	
DAYS WORKED*		U. 21-22	

SCHOOL CALENDAR			
BEGAN		U. 23-25	
ENDED		U. 26-28	
Worked			

	SKILL BOOKLETS							CURRICULUM TEST				SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
	DATE	PRES.	SKILL	PAGE	INST.	SCORE	MAX. POINTS	PART 1		PART 2				
	→	→	→	↓	↓			SCORE	%	SCORE	%			
	PRES.	INIT.	NO.	NO.	TECH CODES			S. 72-73	S. 74-75					
	S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71	////	////	SCORE	S. 72-73	SCORE	S. 74-75	////	S. 76-77	
1														
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18														

CODES	INSTRUCTIONAL TECHNIQUE
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OVERFLOW
U. & S. 79

EYPUNCH SAMPLE

L PRE % POST. %

-31 U. 32-33 U. 34-35

80 95

TO 78

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	% ▼	POST	% ▼	POST	% ▼	POST	% ▼
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

MATHEMATICS PRESCRIPTION SHEET

PAGE: OF

SCHOOL STAMP
U. S. 2-3

STUDENT NAME

STUDENT NUMBER

U. S.

GRADE

ROOM

UNIT

U. S. 9
U. S. 10 11 12

UNIT DATES

UNIT BEGAN
U. 13-16

UNIT ENDED
U. 17-20

DAYS WORKED*
U. 21-22

SCHOOL CALENDAR

BEGAN
U. 23-25

ENDED
U. 26-28

Worked

	SKILL BOOKLETS							CURRICULUM TEST				SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
	DATE	PRES.	SKILL	PAGE	INST.	SCORE	MAX. POINTS	PART 1		PART 2				
	→	→	→	↓	↓			SCORE	%	SCORE	%			
	PRES.	INIT.	NO.	NO.	TECH CODES			S. 72-73	S. 74-75					
	S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71	////	////					////	S. 76-77	
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OVERFLOW
U. & S. 79

EYPUNCH SAMPLE
 PRE % POST %
 -31 U. 32-33 U. 34-35 TO 78
 80 95

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
			▼		▼		▼		▼
X									
X									
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X									

TEACHING IN IPI

Section 7

PLANNING TIME

Suggested setting: 1. Individual work
2. Instructional team

This section is designed to introduce you to the way IPI teachers work together as an instructional team to individualize instruction for their students.

PLANNING TIME

The teacher:

1. Meets with his instructional team to initiate planning sessions.
 - a. Discusses practices and procedures for IPI planning sessions as described in this section.
 - b. Revises, deletes and adds to these practices and procedures, with the team, to establish a model of a planning session for the group. (The model will specify organizational details, basic requirements, and ground rules.)
 - c. Obtains copy of information developed in (b).
 - d. Agrees to details (time, chairman, etc.) for next planning session.
2. Participates in planning sessions.
 - a. Provides specific descriptive data about IPI students and IPI classes.
 - b. Cooperates in assigning students to teachers for the week.
 - c. Identifies and contributes to resolving IPI instructional problems.
 - d. Accepts and implements decisions of IPI team.
 - e. Acts as chairman of IPI team as needed.
 - f. Reports and suggests procedures for smoother operation of IPI.
 - g. Confines discussion to the topics of the session as stated in the agenda.

PLANNING TIME

IPI works to the best advantage of students when their teachers plan together as an instructional team. Time for planning is scheduled before, during or after the school day. During this time, a particular group of teachers holds planning sessions to collaborate in making instructional decisions about the students assigned to them.

In some IPI schools, planning time also includes regularly scheduled time for prescription writing. When this is done, usually 1-3 teachers work together to develop prescriptions for selected students. This involves some consultation among the teachers as each works on writing prescriptions. Since the practice of scheduling prescription writing time varies from school to school depending upon staff size and time available, and since guidelines for developing a prescription have been discussed in a previous section, this discussion will focus on planning sessions.

The planning sessions give the teachers, as a group, an opportunity to:

1. Review the progress of each student in the assigned classes.
2. Organize students, teachers, and aides for IPI instruction.
3. Share instructional problems with other teachers and to solve them by using the professional experience and thinking of the team.
4. Identify and resolve operational difficulties arising from IPI materials, physical facilities and mechanics.
5. Continue their study of individualized instruction and IPI.

Let's look at a planning session held at one IPI school to see how this time is used to accomplish these purposes.

In one school, four third-grade teachers meet every Monday at 1:15 p.m. for 45 minutes to discuss their IPI math classes. The principal and floating teacher join them. Since time is limited, the group adheres closely to an agenda prepared by the principal or some other member of the group. Two items always appear on the agenda: review of students' progress, and organization and assignments for instruction. Additional items are added as needed from week to week. This week the agenda looks like this:

IPI Planning Session

Williams Elementary School

Grade 3 Chairman Marie Brown Date 10/31/67

.....

1. Review of flow charts.
2. Instructional regrouping and teacher assignment.
3. Excessive amount of classtime spent by students waiting for teacher's help.
4. Demonstration of some teacher-made math games related to area of Numeration.
5. Next planning session.

Decisions: (what, who, how, when)

Reviewing flow charts is the first item on the agenda. Each class is listed on a flow chart which locates each student in the Continuum at that date:

Williams Elementary School

Teacher Janet Hicks
Grade 3

Student	Date <u>10/24</u>	Date <u>10/31</u>		
1. Anderson, Bob	B-Num.-1	B-PV-Post		
2. Arsen, William	C-PV-3	C-Add.-3		
3.	.	.		
4.	.	.		
5.	.	.		
6.	.	.		
.	.	.		
.	.	.		
.	.	.		
.	.	.		
n	C-Sub.-Pre	C-Sub.-Post		

In addition, the students on the particular grade level are listed on one flow chart used by the principal and floating teacher. This chart represents the distribution of the students on that grade level in the Continuum by unit skill:

<u>Level</u>	<u>Unit Skill</u>	<u>No. of Students</u>
B	Num. 1	4
	3	2
	PV 3	2
	.	.
	.	.
	.	.
	Geom. 2	1

The information on this chart summarizes the progress of all the students assigned to the instructional team and is used by the principal and floating teacher to help the teachers group students for instruction.

With these charts, the IPI team is able to follow each student as he moves through the Continuum. Further, inconsistencies or undue delays in any student(s)' progress become evident immediately and the student(s) are singled out for additional attention. After this review, the listings are considered for the purposes of assigning students to teachers for IPI instruction for the following week.

At this planning session, the teachers decide all but five students will remain with their own teachers. These teachers will write the prescriptions for the students in their classes. It is decided that the

five students will be assigned to one of the teachers for three days. These students are all ready to take either a pretest or a posttest, and they will need help in reading directions. This teacher will also write their prescriptions during this time. Within the week, each student will be returned to his own class as soon as he is working on a prescription in a new skill.

In arriving at this decision, these teachers followed some general guidelines for assigning students based on individual needs to teachers for IPI classes:

1. If any students are working on the same unit skill, they are sometimes assigned to the same teacher. This is student-assignment based upon skill achievement. In this manner, the teacher to whom they are assigned can concentrate on developing individual prescriptions within a narrower range of the Continuum.
2. If any students are working on similar materials and equipment or sharing materials and equipment, they are assigned to the same teacher who will guide and supervise them as each carries out his individual prescription.
3. If any student has a particular emotional need or some personal-social characteristic that is best served by assignment to a particular teacher or with a particular peer group, he is so assigned if possible.
4. If any student requires a great deal of special help in some behavior(s) related to working in IPI math (such as reading directions, working independently, study skills, etc.), he is

assigned to a teacher particularly skilled in handling this area
a/o to a group small enough to permit direct teacher guidance
of the individual.

The next item on the agenda (the amount of time that students spend waiting for teacher-help) was placed there at the request of one teacher who finds herself swamped by requests from students for help during class-time. The teacher describes the situation in her class to the others in the IPI team. As they discuss the problem, the teacher realizes she has encouraged this dependency by the kind of prescriptions she has been writing and by the information-giving role she has been using. The discussion results in three concrete suggestions:

1. Vary Instructional Techniques in prescriptions; use #2, 6, 10, and 11 in particular.
2. Inform students that they are to signal for teacher-help only after they've made every attempt to work out the problem themselves.
3. Use guiding questions and provide cues related to the student's problem instead of giving the final answer.

There are other suggestions, but the teacher selects these three to be tried next week. The suggestions are recorded on the agenda under Decisions.

For the demonstration of math games, the teacher who made them distributes them to the others. They manipulate and play with the games, and discuss their use in relation to specific unit skills in Numeration. The games are given a code number to correspond to the unit skills they teach.

Then topics for the agenda of the next planning session are listed. Review of flow charts and student assignments are automatically listed. The principal asks that they include a discussion about needed revisions of IPI worksheets. The rest of the agenda is left open for addition of topics as the week goes on. It is decided that the principal will chair the next planning session and will complete the agenda for the group.

THE FOLLOWING MATERIALS OFFER A FRAMEWORK FOR DEVELOPING A MODEL OF A PLANNING SESSION FOR YOUR SCHOOL. USE THEM TO HELP YOURSELF STRUCTURE YOUR FIRST PLANNING SESSIONS. CONTINUE USING THEM TO CHECK THE DEVELOPMENT OF PLANNING SESSIONS.

1. Read the following pages:
 - a. Some Organizational Details of IPI Planning Sessions
 - b. Basic Requirements for a Planning Session
 - c. Suggested Ground Rules for a Planning Session
 - d. General Guidelines for Assigning Students to Instructional Groups in IPI
2. Arrange to meet with the others who will be on the same instructional team with you.
 - a. Ask the principal to schedule a meeting to be held some time during this session for your team, and to announce the names of the team members.
 - b. Ask the team members to prepare for this meeting by reading this section.
3. Meet with the instructional team as scheduled.
 - a. Select a temporary chairman.
 - b. Review the materials you have read.
 - c. Revise, delete and add to them to make them fit the needs of the children in your school.
4. Record this information and arrange to have a copy given to each team member.
5. If time permits, start an agenda for the meeting.
6. Designate the chairman for the next meeting and set a time.
7. Adjourn and continue other work in progress.

Some Organizational Details of IPI Planning Sessions

Time: Usually 45-60 minutes scheduled once a week.

IPI Instructional Team (about 4-6 professionals)

Classroom teachers of one grade level or adjacent grade levels who teach IPI Math at the same time.

Building principal

Floating teacher* (A teacher assigned to work with this team for a specified amount of time during the week. Usually this teacher is not responsible for a register.)

IPI Coordinator* (A supervisor or assistant principal assigned the overall program responsibility of IPI in the school.)

*These are optional positions in an IPI school. Such considerations as budget, pupil-teacher ratio, administrator's workload, etc. are used to decide whether or not these positions should be created.

Subject area

Mathematics

Basic Requirements for a Planning Session

Agenda:

1. Completed by chairman and in the hands of the IPI team before the meeting.
2. Indicates grade, date, chairman, topics, and a space for decisions.

Flow charts:

1. Lists students by class and indicates the unit skill placement for each.
2. Distribution of students on a grade level by unit skill.

Teacher participation:

1. Provides specific descriptive data about IPI students and IPI classes.
2. Cooperates in assigning students to teachers for the week.
3. Identifies and contributes to resolving IPI instructional problems.
4. Accepts and implements decisions of IPI team.
5. Acts as chairman of IPI team as needed.
6. Reports and suggests procedures for smoother operation of IPI.
7. Confines discussion to the topics of the session as stated in the agenda.

Principal's participation:

1. Preparation for planning session:
 - a. Observes and teaches in IPI classes.
 - b. Keeps a record of the operation of the program, e.g. materials, aides, teacher-student relations, etc.
 - c. Reviews prescriptions or a sampling of prescriptions for such things as length, accuracy, variations, etc.
 - d. Reviews flow charts.
 - e. Checks that all arrangements for the planning sessions have been made.

2. Participates in the planning session (see: Teacher participation) and makes a contribution of unique data as principal of the school.
3. Provides administrative support for all planning sessions, and implements decisions made at planning sessions.
4. Maintains overall responsibility for planning sessions:
 - a. Guides continuity of sessions.
 - b. Identifies needs for a variety of inservice training experiences.
 - c. Establishes and reinforces basic ground rules for planning sessions.
 - d. Assists ad hoc chairman of planning session.

Suggested Ground Rules for a Planning Session

1. Stick to the agenda.
2. Offer an alternate procedure or a tentative solution (no matter how good or bad) with every criticism or problem that is stated.
3. Work toward a consensus or general agreement on decisions made.
4. Live by the decisions made at planning sessions.
5. Participate in the instructional decision-making for all the students assigned to the teachers in the IPI team.
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- 7.
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ADD YOUR SUGGESTIONS TO THIS LIST.

DISCUSS THE LIST WITH THE OTHERS ON
YOUR INSTRUCTIONAL TEAM.

DECIDE UPON WHICH ONES YOU WILL USE
IN YOUR PLANNING SESSIONS.

General Guidelines for Assigning Students
to Instructional Groups in IPI

1. If any students are working on the same unit skill, or similar unit skills, they are sometimes assigned to the same teacher. This is student-assignment based upon skill achievement. In this manner, the teacher to whom they are assigned can concentrate on developing individual prescriptions within a narrower range of the Continuum.
2. If any students are working on similar materials and equipment or sharing materials and equipment, they are assigned to the same teacher who will guide and supervise them as each carries out his individual prescription.
3. If any student has a particular emotional need or some personal-social characteristic that is best served by assignment to a particular teacher, peer tutor or particular peer group, he is so assigned if possible.
4. If any student requires a great deal of special help in some behavior(s) related to working in IPI math (such as reading directions, working independently, study skills, etc.), he is assigned to a teacher particularly skilled in handling this area a/o to a group small enough to permit direct teacher guidance of the individual.